

Proponent's Environmental Assessment for Southern California Edison Company's Eldorado-Pisgah-Lugo 220 kV Project

April 2023

The Eldorado-Pisgah-Lugo 220 kV Project located in San Bernardino County, California and Clark County, Nevada, involves the installation of new inter-set structures, modification of hardware on existing structures, installation of new conductor and overhead groundwire, and modification of equipment at existing substations and a switchyard.

Application A.23-XX-XX to the California Public Utilities Commission

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Required PEA Appendices and Supporting Materials *

Appendix A	Detailed Maps and Design Drawings
Appendix B	Emissions Calculations
Appendix C	Biological Resources Technical Reports
Appendix D	Cultural Resources Studies
Appendix E	Detailed Tribal Consultation Report
Appendix F	Agency Consultation and Public Outreach Report and Records of Correspondence
Appendix G	Fire Prevention and Emergency Response Plan
Appendix H	Ambient Noise Survey
Appendix I	Visual Resources Technical Report
Appendix J	Paleontological Resources Technical Report
Appendix K	Vehicle Miles Traveled Calculations
Appendix L	Weather Data
Appendix M	Hazardous Materials and Waste Management Plan
Appendix N	Soil Management Plan
Appendix O	Helicopter Use and Safety Plan
Appendix P	Fugitive Dust Plan
Appendix Q	Wildfire Mitigation Plan
Appendix R	Burrowing Owl Management and Passive Relocation Plan
Appendix S	Nesting Bird Management Plan
Appendix T	Habitat Restoration Plan
Appendix U	Invasive Plant Management Plan
Appendix V	FAA Notice and Criteria Tool Results
Appendix W	300' List

* Note: SCE has provided those appendices and supporting materials identified as 'Required' in the CPUC's *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments*; these appendices are presented in this PEA in the same order as presented in the *Guidelines*. Appendices H through V to this PEA contain supporting materials as referenced in this PEA document.

5 Environmental Analysis

This Chapter examines the potential environmental impacts of the EPL Project. The analysis of each resource category begins with an examination of the existing physical setting (baseline conditions as determined pursuant to Section 15125(a) of the CEQA Guidelines) that may be affected by the EPL Project. The effects of the EPL Project are defined as changes to the environmental setting that are attributable to project construction and operation.

Significance criteria are identified for each environmental issue area. The significance criteria serve as a benchmark for determining if a project would result in a significant adverse environmental impact when evaluated against the baseline. According to the CEQA Guidelines Section 15382, a significant effect on the environment means "...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Project."

CEQA Guidelines Section 15126.4(a)(3) states that mitigation measures are not required for effects which are not found to be significant. Therefore, no measures are proposed. Compliance with laws, regulations, ordinances, and standards designed to reduce impacts to less than significant levels are not considered mitigation measures under CEQA.

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5.1 Aesthetics

This Section of the PEA examines visual resources in the area of the EPL Project to determine how the EPL Project could affect the aesthetic character of the landscape. This section includes a description of existing visual conditions and an evaluation of potential visual impacts on aesthetic resources resulting from the construction, operation, and maintenance of the EPL Project. The EPL Project includes reconductoring portions of approximately 176 miles of existing 220 kV transmission facilities within an existing utility right of way (ROW) between the existing Lugo Substation in southern California and the existing Eldorado Substation in Nevada.

Visual or aesthetic resources are generally defined as the natural and built features of the landscape that can be seen. Landforms, water, and vegetation patterns are among the natural landscape features that define an area's visual character, whereas buildings, roads and other structures reflect human modifications to the landscape. These natural and built landscape features are considered visual resources that contribute to the public's experience and appreciation of the environment. This report analyzes whether the EPL Project would alter the perceived visual character of the environment and cause visual impacts.

The visual analysis is based on site reconnaissance and review of technical data including maps and drawings as well as review of aerial and ground level photographs of the EPL Project area, review of public policy and planning documents, and computer-generated visual simulations that portray the project's appearance. Field observations were conducted in September and December 2017, and April 2022 to document existing visual conditions in the EPL Project's vicinity, including potentially affected sensitive viewing locations.

Visual simulations were prepared to support the impact analysis and illustrate before-and-after visual conditions in the EPL Project area as seen from four key sensitive public viewpoints or Key Observation Points (KOPs) out of a total of 18 representative viewpoints. The KOPs represent views where the project would be most visible to the public from sensitive locations such as designated scenic roadways, recreation facilities, areas in proximity to residences, or public land subject to scenic resource management policy.

This visual assessment employs methods based, in part, on those adopted by the U.S. Department of Interior Bureau of Land Management (BLM), USDOT Federal Highway Administration (FHWA), and other accepted visual analysis techniques. The impact analysis describes change to existing visual resources and assesses viewer response to that change. Central to this assessment is an evaluation of key views from which the project would be visible to the public. The visual impact assessment is based on evaluation of the project-related changes to the existing visual resources that would result from construction and operation of the project; the changes were assessed, in part, by evaluating views of the EPL Project provided by the computer-generated visual simulations and comparing them to the existing visual environment. A description of the technical methods that were employed to prepare the visual simulations is included in Section 5.2.

5.1.1 Environmental Setting

5.1.1.1 Landscape Setting

Figure 5.1-1 shows the EPL Project location within a regional and local landscape context, as well as the locations where photographs were taken. The project is located in the Mojave Basin and Range Eco-region, open, high-desert landscape of the Mojave Desert, an approximately 47,900 square-mile area confined to southeastern California and the southern tip of Nevada, with small extensions into northwestern Arizona and southwestern Utah.

Within California, the Mojave Desert is bounded to the west by the Tehachapi Mountains, to the southwest by the San Bernardino and San Gabriel Mountains, to the northwest by the southern Sierra Nevada and the lowland portions of the Inyo, Panamint, and White Mountains, and to the east by the lower Colorado River valley. This area is characterized by abrupt changes in topography, with broad expanses of gently sloping shallow playas or dry lakebeds comprised of light-colored alluvial deposits, interspersed with rugged, relatively narrow mountain ranges that include large areas of exposed, multicolored rock. Elevations in the Project area range from approximately 3,750 feet above sea level at Lugo Substation, situated on the northern flank of the San Bernardino Mountains at the southern end of the route, to approximately 1,800 feet above sea level at Eldorado Substation at the route's northern terminus. Elevations along the Project route range from approximately 1,200 feet above sea level in the Devils Playground area of the Mojave National Preserve to approximately 5,000 feet above sea level where the Project crosses the McCullough Mountains northeast of State Route (SR)-164/Nipton Road, near the terminus of the project in southern Nevada. Vegetation throughout this arid region is relatively sparse, consisting primarily of low-growing desert scrub varieties, grasses, and creosote bush with their distinctive grey-green foliage. This sparse vegetation pattern affords opportunities for largely open, panoramic views across the landscape. Dominated by the visually distinctive *Yucca brevifolia*, Joshua Tree woodland is an important vegetation type found in the eastern portion of the Project area.

The majority of the Project area consists of largely undeveloped land that is sparsely populated. With a few exceptions, roadways in this area are, lightly traveled and many are unpaved, generally limited to off-road or high-clearance vehicles. Concentrated residential development is limited to the city of Hesperia, situated immediately north and east of Lugo Substation, and gives way to increasingly isolated, scattered rural residences along the project route as it extends northeast through the unincorporated community of Lucerne Valley, then eventually crosses a series of largely uninhabited alluvial basins and mountains for approximately 140 miles. These areas include the Johnson Valley Off-Highway Vehicle (OHV) and the Rodman Mountains Wilderness Areas, situated at the northwestern edge of the Marine Corps 29 Palms training center south of I-40. After crossing I-40 and the Burlington Northern Santa Fe (BNSF) rail line near the Pisgah Switchyard, the Project route continues through the rugged, scenic terrain of Mojave Trails National Monument, managed by the BLM and the Mojave National Preserve, managed by the National Park Service (NPS). Entering the broad, panoramic Ivanpah Valley at the eastern edge of the Mojave National Preserve the project route subsequently crosses the McCullough Mountains and terminates at Eldorado Substation in Nevada's El Dorado Valley.

Along with the diverse natural scenery that characterizes the Project's landscape setting is a variety of built features including infrastructure associated with regional highways and electrical utility and railway corridors. Established utility elements include wood utility poles supporting distribution and other overhead power lines, telecommunication towers, and substations. In addition, lattice structures support several non-EPL Project transmission lines in the Project area, and cross or closely parallel the Project along much of its route.

5.1.1.2 Scenic Resources

Scenic resources are those natural and built landscape patterns and features that are considered visually or aesthetically pleasing, and therefore contribute positively to the definition of a distinct community or region. Scenic resources may include trees or other important vegetation; landform elements, such as hills or mountains, ridgelines or rock outcroppings; water features, such as rivers, bays, or reservoirs; and landmarks, important buildings, or historic sites and structures.

Panoramic views and dramatic rock formations characterize the landscape along much of the Project alignment. Recognized scenic resources within the Project area include an approximately 53-mile section of the Mojave National Preserve, administered by the NPS. Additionally, approximately 103 miles of the Project alignment crosses BLM-administered land, with Visual Resource Management (VRM) Class II, III and IV designations, approximately 28 miles of this area lie within Mojave Trails National Monument.

Sections 5.1.1.8 and 5.1.2.1 and Tables 5.1-4 and 5.1-5 provide additional information regarding BLM administered land and scenic resources management classifications. Figure 5.1-4 is a map showing BLM visual resource management classifications in the Project area.

In the Project vicinity various public roadways are recognized for providing visual access to the area's scenic resources. Scenic roadways in the project area are listed in Table 5.1-1 and shown on Figure 5.1-1. The State Scenic Highway program is also discussed below in Section 5.2.2, Regulatory Setting. Visual sensitivity considerations along the project alignment include proximity to eligible state scenic highways, San Bernardino County scenic routes, and the National Trails Highway.

Table 5.1-1. Summary of Scenic Roadways Within the Project Area

Roadway location	Designation	Relationship to Project	Representative Photograph and Viewpoint # (Figure 5.1-1)
SR-18 San Bernardino County	County Scenic Route	Project Crosses	4
SR-247 San Bernardino County	Eligible State Scenic Highway; County Scenic Route	Project crosses	No project modifications at these locations
I-40 San Bernardino County	Eligible State Scenic Highway; County Scenic Route	Project crosses	9
Route 66 National Trails Highway San Bernardino County	National Scenic Byway	Project crosses	9
Kelbaker Road San Bernardino County	County Scenic Route	Project crosses	12
Cima Road San Bernardino County	County Scenic Route	Project crosses	14
Ivanpah Road San Bernardino County	County Scenic Route	Project crosses	16
SR-164 (Nipton Road) Clark County	Designated as Joshua Tree Highway between Searchlight and the Nevada state line	Project crosses	17
SR-38 San Bernardino County	Eligible State Scenic Highway; Designated as part of the Rim of the World Scenic Byway, a National Forest Scenic Byway	Project comes within 17 miles and is not visible	

5.1.1.3 Viewshed Analysis

A project viewshed is defined as the general area from which a project is visible. For purposes of describing a project's visual setting and assessing potential visual impacts, the viewshed can be broken down into foreground, middleground, and background zones. The foreground is defined as the zone within

0.25 to 0.5 mile from the viewer. The middleground is defined as the zone extending from the foreground to a maximum of 3 to 5 miles from the viewer; and the background zone extends from the middleground to infinity (USFS 1995 and USDOT 2015). The BLM defines a foreground-middleground zone out to 3 to 5 miles, a background zone out to 15 miles, and a seldom seen distance zone including portions of the landscape which are generally not visible from key observation points (KOPs), or portions which are visible but at a distance of more than 15 miles (BLM 1986).

Viewing distance is a key factor that affects the potential degree of project visibility. Visual details generally become apparent to the viewer when they are observed in the foreground, at a distance of 0.25 to 0.5 mile or less. Analysis of the project primarily considers the potential effects of project elements on foreground viewshed conditions although consideration is also given to the potential effects on the middleground and background views.

Figure 5.1-2 presents a computer-generated viewshed analysis for the EPL Project alignment that identifies the theoretical visibility, up to a distance of 5 miles of the EPL Project's proposed infrastructure based on modeling the height of project components and surrounding topography. Areas on the map are identified where the project could be visible or not. It should also be noted that the majority of the alignment where Project modifications would occur includes only new conductor and associated hardware, thus resulting in barely noticeable permanent visual change when seen beyond a relatively short distance. The introduction of more-visible new inter-set structures would be limited to relatively widely dispersed locations along Segments 1 and 2. The photographs in Figure 5.1-3 illustrate that, in the absence of intervening vegetation, structures, or other factors such as atmospheric conditions, views of proposed EPL Project infrastructure are generally unobstructed by topography in the entirety of the eastern portion of Segments 3 and 4, and much of the western portion of Segments 1 and 2, where the terrain is relatively flat. Along the eastern portion of Segments 1 and 2 and the western portion of Segments 3 and 4, with the exception of an approximately 11-mile portion east and west of I-40, visibility of transmission structures is generally more limited due to intervening topography or by backdrop topography. Within the more mountainous portions of Segments 3 and 4 especially, the scale of surrounding topography in relation to Project structures combined with atmospheric haze common to the desert environment result in reduced visibility of the Project.

5.1.1.4 Landscape Units

Four landscape units incorporating the six EPL Project segments have been identified for purposes of documenting and describing existing visual conditions within the Project viewshed. These landscape units or subareas are based upon the physical and cultural landscape characteristics found along the Project's approximately 176-mile-long corridor. With the exception of the westernmost portion of the Project area, encompassing the city of Hesperia and surrounding communities, which is characterized by a relatively diverse mix of land uses, the majority of the Project passes through generally scenic and largely undeveloped landscapes that are for the most part uninhabited. In these areas public access is limited due to topographic constraints including mountains and sand dunes as well as the small number of all-weather, paved roadways and general lack of public services near locations crossed by the Project. Table 5.1-2 summarizes the landscape units in terms of their location and approximate length, and their relationship to Project segments. Figure 5.1-1 depicts the location of landscape units in relationship to the project alignment and photograph viewpoints. All photographs referenced below are found in Figure 5.1-3.

Table 5.1-2. Summary of Landscape Units

Landscape Unit	Location	Approximate Length	Project Segments
1: Lugo Substation to Lucerne Valley	San Bernardino County	21 miles	Part of 1 and 2
2: Lucerne Valley to Fry Mountains	San Bernardino County	18 miles	Part of 1 and 2
3: Fry Mountains to Kelbaker Road	San Bernardino County	79 miles	Part of 3 and 4
4: Kelbaker Road to Eldorado Substation	San Bernardino County and Clark County	58 miles	Part of 3 and 4; entirety of 5 and 6

5.1.1.4.1 Landscape Unit 1 (Photographs 1 through 4)

Landscape Unit 1 encompasses an area of established urban and suburban desert communities situated in the Mojave River basin at the foot of the San Bernardino Mountains and extends approximately 21 miles across Apple Valley to near SR-247 at the western margin of Lucerne Valley. Defined by the historic floodplain of the Mojave River on the west, the landscape traversed by the Project in this landscape unit is predominantly flat. Immediately northeast of its origin at Lugo Substation is an approximately 7-mile-wide developed area comprised of relatively dense, predominantly single-story residences along with roadways and railway infrastructure along the southern periphery of the City of Hesperia. East of Hesperia, the development pattern becomes more sparse, consisting of scattered suburban and rural residences. At the northeast margin of Apple Valley, the Project crosses SR-18, a well-traveled regional highway, and Project Segment 1 converges with a non-EPL transmission alignment that it then closely parallels all the way to the Pisgah Switchyard. After traversing the southeastern flank of the Granite Mountains, the Project descends into Lucerne Dry Lake, a broad alluvial expanse north of the unincorporated community of Lucerne Valley, where approximately 3.75 miles west of SR-247 the parallel circuits of the Project alignment (Segments 1 and 2) diverge into separate single circuit segments and enter Landscape Unit 2.

Photographs 1 through 4 show representative views of the Project and surrounding landscape character found within Landscape Unit 1. One of these views is a KOP selected to show the Project as seen from Ranchero Road, a major thoroughfare in the city of Hesperia (refer to Figure 5.1-1).

5.1.1.4.2 Landscape Unit 2 (Photographs 5 through 7)

Landscape Unit 2 extends approximately 18 miles across Lucerne Dry Lake to the Fry Mountains, traversing the gently sloping terrain bordering the north end of Johnson Valley, an expansive, 20 mile-long alluvial plain extending southeast of the Project. Crossed by SR-247, Lucerne Dry Lake consists of a broad saline flat bordered by a limited number of dispersed rural residences and scattered irrigated cropland. The open desert landscape to the east is a largely uninhabited and sparsely vegetated. Apart from a few paved roadways adjacent to Lucerne Dry Lake, vehicular access in this landscape unit is restricted to unpaved powerline maintenance roads and informal, off-road tracks concentrated in proximity to the BLM administered Johnson Valley and ORD Mountains OHV Recreation areas and the Rodman Mountains Wilderness Area. Throughout Landscape Unit 2 the Lugo-Pisgah Segments 1 and 2 remain separated from each other by up to approximately 4.75 miles. For the length of this unit Segment 1 runs parallel to a non-EPL transmission line.

Photographs 5 through 7 are representative existing views of the Project and surrounding landscape character found within Landscape Unit 2. Photograph 5 shows the unrelated transmission line that runs

parallel to Project Segment 1. Two of the views are KOPs selected to show the Project as seen from locations within the BLM administered Johnson Valley OHV Recreation Area (refer to Figure 5.1-1).

5.1.1.4.3 Landscape Unit 3 (Photographs 8 through 12)

Landscape Unit 3 extends approximately 79 miles from the Fry Mountains to Kelbaker Road. The Project passes through a series of ancient volcanic outcrops, where Segments 1 and 2 converge to once again closely parallel one another, skirting the northwestern boundary of the Federally administered Marine Corps Combat training center, before descending into a broad alluvial plain, where it crosses I-40 and the historic Route 66 (National Trails Highway). The two Project segments terminate at Pisgah Switchyard located approximately 0.36 miles northeast of I-40. Segment 1 runs parallel to a non-EPL transmission line all the way to Pisgah Switchyard. From Pisgah Switchyard, for approximately the next 44 miles Segments 3 and 4 of the Project alignment extend towards Kelbaker Road in a generally northeasterly direction, crossing BLM administered land that includes a portion of Mojave Trails National Monument, as well as the Mojave National Preserve, through a landscape of isolated mountainous outcrops separated by gently sloping alluvial plains and flat dry lake beds. This area attracts primarily day-use recreational visitors that access the area via Kelbaker Road which bisects the preserve between I-40 to the south and I-15 to the north and serves as the only paved roadway within this landscape unit with the exception of I-40/National Trails Highway. Kelso Depot and Mojave National Preserve Visitor Center are located at the junction of Kelbaker Road and Cima Road, approximately 10 miles south of the Project along a segment of the BNSF/Amtrak rail corridor. With fewer than a dozen permanent dwellings, it represents the area's only permanent settlement. The Project alignment crosses the BNSF/Amtrak rail corridor approximately 20 miles west of Kelso Depot.

Photographs 8 through 12 are representative existing views of the Project and surrounding landscape character found within Landscape Unit 3 (refer to Figure 5.1-1).

5.1.1.4.4 Landscape Unit 4 (Photographs 13 through 18)

From Kelbaker Road the EPL Project enters the eastern portion of the Mojave National Preserve, crossing a landscape punctuated by scattered volcanic domes and ancient lava beds. The route partially parallels and crosses a segment of the historic Old Mojave Road, a narrow unpaved track limited to offroad vehicles, and gradually descends into the Ivanpah Valley, an approximately 25 mile-long and 7- to 10-mile-wide basin with panoramic views of surrounding mountains that rise to approximately 4,000 feet above the valley floor. In this area the predominant scattered low desert scrub vegetation found elsewhere along the Project route gives way to a more diverse vegetation pattern that includes some of the most extensive concentrations of Joshua Tree (*Yucca Brevifolia*), endemic to the Mojave Desert. Reaching heights of approximately 15 feet or more, these trees partially screen open views toward the Project from some locations. Cima Dome and nearby Teutonia Peak are popular recreation destinations situated within approximately 5 miles of the Project alignment. Access to these areas is via several paved roadways that are crossed by the Project, including Cima Road and Morningstar Mine Road; the latter partially parallels the Project alignment where it enters Ivanpah Valley. The Project route continues across Ivanpah Valley, crossing Ivanpah Road, which provides access to several historic mines and ghost towns in the mountains bordering the Ivanpah Valley's southern perimeter. The Project also comes within approximately 2.3 miles of the community of Nipton, a small tourist destination at the eastern edge of Ivanpah Valley located approximately 2.75 miles west of the Nevada state line. With approximately 20 permanent residents, Nipton represents the only location with permanent inhabitants in this landscape unit. The Project crosses the California-Nevada state line approximately 2.9 miles east of Nipton, where it crosses SR 164 and the

McCullough Mountains, subsequently entering El Dorado Valley and terminating at the Eldorado Substation.

Photographs 13 through 18 show representative existing views of the Project and surrounding landscape character found within Landscape Unit 4. One of the views is a KOP showing the Project from Cima Road within the Mojave National Preserve (refer to Figure 5.1-1).

5.1.1.5 Viewers and Viewer Sensitivity

Accepted visual assessment methods, including those adopted by the BLM and other federal agencies, establish sensitivity levels as a measure of public concern for changes to scenic quality. Viewer sensitivity, one of the criteria used to evaluate visual impact significance, can be divided into high, moderate, and low categories. Factors considered in assigning a sensitivity level include viewer activity, view duration, viewing distance, adjacent land use, and special management or planning designation. According to the BLM (1984), visual sensitivity will vary with the type of users. The primary viewer groups within the Project viewshed are described below.

5.1.1.5.1 Motorists

Motorists or roadway travelers are the largest viewer group in the project area. Included in this group are motorists traveling on the region's network of paved roadways with views of the Project. Within the City of Hesperia in Landscape Unit 1, the Project crosses and parallels Ranchero Road, a well-travelled 4-lane arterial, and also crosses a number of residential streets and less heavily used roadways in the suburban fringe northeast of Hesperia. Important regional highways crossed by the Project to the east include SR-18, county scenic route in Landscape Unit 1, and in Landscape Unit 2, SR-247, a county scenic route and an eligible state scenic highway. In Landscape Unit 3 the Project crosses I-40, an eligible state scenic highway and the historic Route 66/National Trails Highway which parallels I-40 at this location. Kelbaker Road, which marks the boundary between Landscape Unit 3 and 4, and Cima Road to the east, both crossed by the Project, are county scenic routes where they traverse Mojave National Preserve.

Motorists include both local and regional travelers who are familiar with the visual setting and recreational travelers using area roadways on a less regular basis. Local travelers include those commuting to or residents of communities in the vicinity of the Project area as well as drivers of commercial vehicles in and near the city of Hesperia, including the communities of Victorville, Apple Valley and Lucerne Valley. Regional motorists also include long distance truck drivers, and recreational visitors to the area as noted below. The duration of motorists' views is generally brief, and, depending upon the travel route and type of roadway, could range from a few seconds to up to several minutes or more. Viewer sensitivity is considered low to moderate.

5.1.1.5.2 Residents

As described above, most of the Project area is sparsely inhabited and views of Project structures are available to residents near the EPL Project alignment to varying degrees. Within Landscape Unit 1 residential populations are primarily concentrated in and immediately around Hesperia and where residences border the Project corridor along the southern perimeter of Hesperia and Apple Valley to the northeast. Residential viewers generally experience close-range views of the Project, as do scattered residents in Landscape Unit 2 in the area around Lucerne Dry Lake. For the larger remaining part of the Project route there are no residences within view of the Project, with the exception of a limited number of residences in the eastern portion of Landscape Unit 4, where the Project passes within 2.3 miles of Nipton and is barely visible. Residential views tend to be long in duration, and the sensitivity of this viewer group is considered moderate to high.

5.1.1.5.3 Recreationalists

Recreationalists including visitors to the Mojave National Preserve, Mojave Trails National Monument, and BLM lands crossed by the project constitute another important viewer group. Recreationalists engaging in activities such as sightseeing, off-road vehicle touring, hiking, bird watching, wildlife viewing, photography, stargazing, camping, running, bicycling, and backpacking may have views of the Project. Off-road vehicle users include those using unpaved OHV recreation routes within the Johnson Valley/Ord Mountains OHV Areas, Mojave National Preserve and Mojave Trails National Monument, as well as users of other designated OHV routes located on BLM administered land. Other recreationalists include equestrians, bicyclists, and hikers on trails within the City of Hesperia. With the exception of campers, view duration for much of this viewer group tends to be short, and although the general expectation of a natural-appearing landscape setting among some of these recreationalists raises the sensitivity to moderate to high, it should be noted that a substantial segment of the Project passing through these areas shares a ROW with unrelated transmission alignments that include existing structures that are noticeably taller than Project structures.

5.1.1.6 Representative Viewpoints

Figures 5.1-3a through 5.1-3i present a set of 18 photographs taken from representative locations along the Project alignment, within the Project viewshed. Table 5.1-3, a summary of the set of representative viewpoints, includes information on the viewpoint location, primary type of viewers, approximate viewing distance to the Project and existing viewing conditions. Table 5.1-3 also highlights a subset of the viewpoints that are KOPs. Additional technical detail about the photographs and viewpoints such as information on photography dates and time of day, and global positioning system (GPS) locations is provided in the Visual Resources Technical Report (Appendix I). Taken together, these photographs convey a general sense of the existing visual character of the landscape within the vicinity of the Project. The set of photographs also demonstrates that existing transmission, sub-transmission and distribution facilities within the Project viewshed, including those of the Project, are established elements of the visual setting of the area.

Table 5.1-3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
Landscape Unit 1			
1. Cottonwood Avenue looking southwest towards Lugo Substation	Local motorists Nearby residents	425 feet (0.08 mile)	This street view, taken a residential section of Hesperia, looks along the EPL Project ROW toward the western end of the Project. Parallel lattice towers of EPL Segments 1 and 2 lines are in foreground to the left and center, with numerous unrelated adjacent transmission structures visible in the distance to the right. To the left, Lugo Substation is barely visible in the distance against a hazy backdrop of the San Bernardino Mountains. Visible along both sides of Project ROW, residences are partially screened by vegetation.
2. Ranchero Road near Via Quintana looking east	Local and regional motorists Nearby residents	360 feet (0.07 mile)	This KOP view from a well- traveled arterial road within the city of Hesperia shows an existing EPL Project lattice transmission tower partially silhouetted against the sky, beyond a low masonry wall on the right

Table 5.1-3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
			(east) side of road. To the left of the roadway a second Project tower is somewhat visible beyond a power line supported by an array of wood utility poles. Mature trees partially screen residences set back from both sides of the road. Multiple overhead conductors are visible against a backdrop of nearby mountains.
3. Roundup Way at Wikiup Way looking northeast	Local motorists Nearby residents	1,080 feet (0.20 mile)	In this open view taken approximately 2.75 miles northeast of Hesperia, the parallel array of lattice towers supporting EPL Segments 1 and 2 lines can be seen at relatively close range where the alignment crosses a well- traveled rural highway. Wood utility poles parallel the roadway in the distance together with a number of isolated poles dispersed across the desert landscape along with widely scattered suburban and rural dwellings.
4. SR-18 looking north	Regional and local motorists	1,490 feet (0.28 mile)	This roadway view shows two towers associated with the EPL Segments 1 and 2 lines on the left where the Project traverses a saddle of the Granite Mountains north of the highway crossing. The weathered steel lattice structures are barely visible when seen against the highly fractured, mottled rock backdrop.
Landscape Unit 2			
5. Harrod Road in Ord Mountain OHV area looking northeast	Local and regional recreational motorists	1,470 feet (0.28 mile)	This view from the north end of Johnson Valley depicts a gently rising alluvial plain within a BLM administered off- road recreation area. Multiple arrays of lattice transmission towers recede toward a distant ridge in the Ord Mountains visible in the background. Project towers of the EPL Segment 1 alignment are on the right along Powerline Road, and an unpaved maintenance route provides access to popular OHV recreational sites in the area. To the left is a non-EPL transmission line that parallels the entire length of this Project segment.
*6. Red Cedar Ave near Squaw Bush Rd looking east	Local and regional recreational motorists Residents (small numbers)	760 feet (0.14 mile)	Taken approximately 5.5 miles southeast of the previous viewpoint at the edge of upper Johnson Valley, this view shows the EPL Segment 2 alignment as it approaches the southern flank of the Ord Mountains. Seen at close range, the Project tower in the immediate foreground is prominent against a sky backdrop while distant towers along the alignment are less distinct against the textured, dark colored mountain backdrop. On the left, low steel structures with light colored fabric are remnants of an abandoned agricultural operation situated within a largely unoccupied area that includes several scattered residential structures.
*7. Johnson Valley OHV Area near Transmission Line Road looking east	Local and regional recreational motorists	460 feet (0.08 mile)	This is a close-range view toward the EPL Segment 2 alignment where it enters the Ord Mountains north of Johnson Valley, an area favored by recreational OHV motorists in one of two OHV areas within BLM land in

Table 5.1-3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
			and near Johnson Valley. At this location foreground Project towers are noticeable against a backdrop of sky. On the left, more distant Project structures are less distinct against the textured mountain backdrop.
Landscape Unit 3			
8. Powerline Road near Rodman Mountains Wilderness Area looking northeast	Local and regional recreational motorists	690 feet (0.13 mile)	This panoramic view toward the eastern Mojave Valley shows the combined EPL Segments 1 and 2 alignments along a shared ROW with a non-EPL transmission line that includes parallel sets of towers seen to the left. The Marine Combat Center boundary lies immediately to the right of the Project alignment, and the boundary of the Rodman Mountains Wilderness Area is to the left of the alignment. Descending a broad alluvial fan, the multiple tower arrays stand out against the dark rocks of a large ancient lava flow visible in the distance with Old Dad Mountain in the backdrop.
9. I-40/National Trails Highway looking northeast towards Pispah Switchyard	Regional motorists	3,700 feet (0.70 mile)	This view from the heavily traveled I-40, adjacent to the historic National Trails Highway, shows the open, nearly flat surrounding landscape with a mountain backdrop. Motorists have an unobstructed view toward Pispah Switchyard, located approximately 0.8-mile northeast of the highway. The substation marks the junction of the Lugo- Pispah alignments (Project Segments 1 and 2) and the Cima-Eldorado-Pispah alignments (Project Segments 3 and 4). Also visible are transmission structures of a non-EPL transmission line converging on the substation, as well as a prominent lattice steel cell tower with dense steel framework that contrasts with the muted landscape texture seen in the backdrop.
10. Crucero Road in Mojave Trails National Monument looking northeast	Recreational motorists	225 feet (0.04 mile)	This close-range view of the EPL Project shows the parallel Cima-Eldorado-Pispah Segments 1 and 2 alignments where it traverses a sandy playa in the vicinity of Kelso Dunes Wilderness, part of the BLM managed Mojave Trails National Monument. Sharing the Project ROW are tall lattice structures supporting an adjacent unrelated transmission line, visible to the left. Within this area public access is limited to off-road vehicles, and is further restricted to designated routes, such as the unpaved powerline access road seen in the foreground.
11. Jackass Canyon OHV route southwest of Old Dad Mountain looking southwest	Recreational (OHV) motorists and other recreationalists	590 feet (0.11 mile)	This is a panoramic view toward the EPL Project from the southwestern entrance to Jackass Canyon, looking across Devil's Playground dry lakebed and the Kelso Dunes in the middle distance. Seen in the foreground right, an unpaved powerline access road is part of the historic Old Spanish Trail route. This road largely follows the Project ROW through Jackass Canyon and is popular with OHV users in Mojave National

Table 5.1-3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
			Preserve. At this location, EPL Segment 3 structures are seen on the right, along with larger lattice structures unrelated to the Project. On the left an EPL Segment 4 structure is seen against the sky and is approximately 0.2 miles from the Segment 3 alignment.
12. Kelbaker Road looking west	Regional motorists and recreationalists	1,200 feet (0.23 mile)	Extending from I-40 to the south to I-15 in the north, Kelbaker Road is a county designated Scenic Route and the only paved roadway that spans the entire breadth of Mojave National Preserve. The view represents a key travel segment for recreational and regional visitors to the area, as it is situated between Kelso Depot, a California historic landmark and only facility with services in the preserve, located approximately 11 miles to the south, and the historic Mojave Road crossing, approximately 7 miles to the north. This motorist's view, shows the roadway as it crests a low summit in the foreground, with the parallel lattice structures of the EPL Segments 3 and 4 alignments seen against a sky backdrop, along with larger transmission structures from a non-EPL transmission line sharing the ROW, as well as an array of wood utility poles.
Landscape Unit 4			
13. Mojave Road OHV route looking southeast	Recreational motorists, and other recreationalists	2,050 feet (0.39 mile)	Taken from approximately 4.5 miles east of Kelbaker Road, the center of this view shows a pair of EPL Project lattice structures against a panoramic backdrop of low hills and the more distant Ivanpah Valley where the alignment crosses the Old Mojave Road. In the foreground, unrelated transmission structures are visible on the left and right. Alluvial deposits from nearby ancient lava fields combined with the somewhat higher elevation of this location support taller, more varied vegetation, including species of Yucca, visible in the foreground and extending into the middle distance. The unconsolidated alluvium and narrow profile of the unpaved track limits access to the historic road in this location to high clearance off-road vehicles, hikers, and equestrians.
*14. Cima Road looking north	Regional motorists	500 feet (0.10 mile)	This close-range view of the EPL Project crossing at Cima Road shows a pair of Project structures in the immediate foreground against a sky backdrop. To the right, a taller, unrelated transmission tower sharing the ROW is visible a short distance beyond. When seen at close range the relatively dense stands of Joshua Trees partially screen the lower portion of the structures seen in the foreground, and also partially screen views of more distant structures as well as mountains in the backdrop. Cima Road connects with I-15 approximately 16 miles to the north, while providing

Table 5.1-3. Summary of Representative Viewpoints and Photographs

Viewpoint Number, Location, and Viewing Direction (* denotes KOP)	Primary Viewers	Approximate Viewing Distance to Project	Existing Visual Conditions
			trail and OHV access to Cima Dome and Volcanic Field National Landmark as well as Teutonia Peak, approximately 3.3 and 4.8 miles north of the crossing.
15. Morningstar Mine Road looking north	Regional and recreational motorists	600 feet (0.11 mile)	This motorist's view of the EPL Project crossing shows the roadway as it descends into the northern Ivanpah Valley, affording open, panoramic views of mountains flanking the edge of the valley to the north and east. Project towers are seen against a backdrop of landscape and sky on both sides of the roadway. This road is among three in the Preserve receiving the heaviest use, mainly on weekends by regional motorists travelling between Las Vegas and Palm Springs; motorists also include recreational visitors to nearby historic Morning Star Mine.
16. Ivanpah Road looking north	Regional and recreational motorists	1,250 feet 0.24 mile	This panoramic view of the EPL Project crossing from Ivanpah Road, includes the two shorter Project structures along with a taller unrelated transmission structure along the shared ROW. Near the center of the view in the distance is Ivanpah Dry Lake, at the northern terminus of Ivanpah Valley, visible against a backdrop of the Clark Mountains. To its left the Ivanpah Solar Electric Generating facility, with its highly reflective parabolic mirrors, is a dominant visual feature in the landscape.
17. Nipton Road/SR-164 looking southwest	Regional motorists	420 feet 0.08 mile	This view shows the EPL Project alignment crossing Nipton Road/SR-164, approximately 2 miles east of the Nevada State Line. In the foreground view a lattice tower along the Cima-Eldorado-Pisgah #2 (Segment 6) alignment is partially silhouetted against a sky backdrop. Seen against a backdrop of the Clark Mountains at the far edge of Ivanpah Valley, multiple Project structures and unrelated transmission structures recede into the distance at the highway crossing and beyond.
18. US-95 looking northwest towards Eldorado Substation	Regional motorists	3.7 miles	The view from US-95 looks across the El Dorado Valley toward the Desert Star Energy Center, one of several solar energy facilities located in the area. Beyond the solar facility both the EPL Project alignment and Eldorado Substation are barely visible against the more distant backdrop of the McCullough Mountains.

5.1.1.7 Representative Photographs

Figures 5.1-3a through 5.1-3i present a set of 18 photographs taken from representative locations along the alignment within the EPL Project viewshed. The Visual Resources Technical Report (Appendix I) includes additional details about the photographs and viewpoints.

5.1.1.8 Visual Resource Management Areas

More than half of the Project alignment crosses BLM-administered land, which includes Visual Resource Management (VRM) designations for areas under BLM jurisdiction. As shown in Figure 5.1-4 and summarized on Table 5.1-4 in Section 5.1.2.1.2 below, more than half of the land crossed by the Project, and which include new, potentially visible components of the Project, is designated as VRM Class III and Class IV. The BLM management goals in Class III areas call for partially retaining the existing landscape character and allow for a moderate level of change to existing landscape character. In these areas management activity may attract attention but should not dominate the view of the casual observer. Management goals in Class IV areas allow for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. In these areas management activity may dominate the view and may be a major focus of viewer attention. The portions of the Project crossing land designated as Class II is limited to modifications to the existing Project infrastructure (reconductoring and hardware replacement) that would be largely imperceptible to the majority of viewers in the Project area, and would meet BLM management goals in Class II areas, that calls for retaining the existing character of the landscape and where the level of change to the characteristic landscape should be low.

5.1.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the EPL Project.

5.1.2.1 Federal

5.1.2.1.1 Federal Land Policy and Management Act of 1976

The Federal Land Policy and Management Act of 1976 (FLPMA) (43 United States Code [U.S.C.] 1701) and the U.S. Department of the Interior's (DOI) BLM Land Use Planning Handbook (BLM 2005) both emphasize the importance of protecting the quality of scenic resources on public lands. FLPMA sections relevant to the EPL Project are:

- Section 102(a): "The public lands [shall] be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values."
- Section 103(c): Identifies "scenic values" as resources for public management. Section 201(a): "The Secretary shall prepare and maintain on a continuing basis and inventory of all public lands and their resources and other values (including...scenic values)."
- Section 505(a): "Each right-of-way shall contain terms and conditions which will...minimize damage to the scenic and esthetic values."

FLPMA's legal mandate to protect the quality of scenic resources on public lands is carried out by BLM and detailed in BLM's Visual Resource Management (VRM) system, described below.

5.1.2.1.2 US Department of Interior, Bureau of Land Management

The Federal Land Policy and Management Act of 1976 requires BLM to protect the quality of scenic values on public lands (43 U.S.C. 1701). To this end, BLM has developed the Visual Resource Management system to identify and maintain scenic values and visual quality. Under this system, BLM-administered lands are inventoried, analyzed, and assigned visual ratings or Management Classes. Class designations are derived from an analysis of scenic quality (rated by landform, vegetation, water, color, influence of adjacent scenery, scarcity, and cultural modification), a determination of viewer sensitivity levels (sensitivity of people to

changes in the landscape), and distance zones. Management Classes describe the different degrees of modification allowed to the basic elements of the landscape (form, line, color, texture). Management classes and their corresponding goals are defined in Table 5.1-4 and discussed below.

Table 5.1-4. BLM Visual Management Classes and Goals

Management Class	Goals
Class I	To preserve the existing character of the landscape. The level of change to the characteristic landscape should be very low and must not attract attention.
Class II	To retain the existing character of the landscape. The level of change to the characteristic landscape should be low.
Class III	To partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate.
Class IV	To provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high.

Source: BLM

As indicated on the Figure 5.1-4 map showing the Project alignment with VRM classifications on BLM-administered land and summarized in Table 5.1-5, approximately two thirds of the Project alignment cross BLM-administered land. Slightly more than half this land is designated as VRM Class III and Class IV. The BLM management goals in Class III areas call for partially retaining the existing landscape character and allow for a moderate level of change to existing landscape character. In these areas management activity may attract attention but should not dominate the view of the casual observer. Management goals in Class IV areas allow for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. In these areas management activity may dominate the view and may be a major focus of viewer attention. The remainder of the BLM-administered land crossed by the Project is designated as VRM Class II, which allows low levels of change in the characteristic landscape. The most visible component of the EPL Project crossing BLM administered land would consist of new inter-set H-frame structures, and the location of these new structures will be limited to areas designated as VRM Class IV. Of the portions crossed by the Project on land designated as VRM Class II and III, the Project modifications would be limited to selected replacement of conductors and insulators, and these changes would not be noticeable to most viewers.

Table 5.1-5. BLM Land Crossed by EPL Project Alignment

Project Segment	Number of Miles Crossed by EPL Project Alignment				
	Total	VRM Class I	VRM Class II	VRM Class III	VRM Class IV
1	34.0	0	0.1	15.9	18.0
2	18.9	0	0	3.2	15.6
3	24.9	0	16.0	8.8	0
4	25.1	0	16.0	9.1	0
5	20.5	0	18.5	2.0	0
6	20.5	0	18.5	2.0	0
Total	143.9	0	69.1	41.0	33.6

5.1.2.1.3 Bureau of Land Management, Desert Renewable Energy Conservation Plan Record of Decision

Covering more than 20 million acres in seven California counties including Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego County, the Desert Renewable Energy Conservation

Plan (DRECP) was developed as an interagency plan by the BLM, the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission (CEC), and the California Department of Fish and Wildlife. The BLM manages approximately 10 million acres of the 22.5 million acres covered in the overall Plan area.

The DRECP landscape-scale planning effort was undertaken to achieve two sets of overarching goals. The first is Renewable Energy. To address these goals, the plan identifies specific development focus areas with high- quality renewable energy potential and access to transmission in areas where environmental impacts can be managed and mitigated. The second overarching goal concerns Conservation. The plan specifies species, ecosystem and climate adaptation requirements for desert wildlife, as well as the protection of recreation, cultural, visual, and other desert resources. Through the DRECP Record of Decision (ROD) an approved Land Use Plan Amendment (LUPA) establishes a policy framework for BLM-managed land, including management and conservation of visual resources. All BLM-administered land in California crossed by the EPL Project is within the area governed by the DRECP ROD. A map showing the EPL Project Alignment with VRM classes on BLM-administered is included as Figure 5.1-4.

5.1.2.1.4 Bureau of Land Management, Best Management Practice for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands

Bureau of Land Management guidance is provided in this document in the form of 122 best management practices (BMPs) to avoid or reduce potential visual impacts associated with the siting, design, construction, operation, and decommissioning of utility-scale renewable energy generation facilities, including wind, solar, and geothermal facilities as well as ancillary components, such as electric transmission structures and access. (BLM 2015). Selection of structure types and selection of appropriate materials surface treatments are among the pertinent BMPs outlined in this document to minimize potential visual effects and contrast associated with transmission facilities.

5.1.2.1.5 Bureau of Land Management, Mojave Trails National Monument

The Mojave Trails National Monument is a national monument located between Joshua Tree National Park and the Mojave National Preserve along Route 66 in San Bernardino County. The Mojave Trails National Monument is managed by the BLM and covers approximately 965,000 acres. A portion of Segments 3 and 4 span the Mojave Trails National Monument.

5.1.2.1.6 U.S. Department of the Interior, National Park Service, National Scenic and Historic Trails

In 1968, Congress established the National Trails System. National Historic Trails closely follow an historic trail or nationally significant travel route. This national designation ensures that historic routes, historic remnants, and artifacts are identified and protected for public use and recreation (NPS 2017a).

The United States Congress added the Old Spanish National Historic Trail to the National Trails System on December 4, 2002. The legislation authorizing the Old Spanish National Historic Trail identified four major routes (Armijo Route, Northern Route, North Branch, and Mojave Road) that cover approximately 2,850 miles of trail, extending from Santa Fe and Albuquerque, New Mexico, to Los Angeles, California. On June 5, 2003, the Secretary of the Interior assigned joint administrative responsibility for the Old Spanish National Historic Trail to the Bureau of Land Management and the National Park Service.

The Project alignment crosses the Mojave Road portion of the Old Spanish National Historic Trail in a relatively remote location near Old Dad Mountain and the Jackass Canyon OHV route, approximately 4.75 miles northeast of Kelbaker Road, within the Mojave National Preserve. The trail corridor is informally considered by the National Park Service to lie five miles on either side of the centerline of the trail

alignment to include the nearest elements of the viewshed, parts of the cultural landscapes, landmarks, and traditional cultural properties near the trail.

5.1.2.1.7 U.S. Department of the Interior, National Park Service, Mojave National Preserve General Management Plan

The central and eastern portions of Segments 3 and 4 are located within the Mojave National Preserve. The California Desert Protection Act of 1994 established the Mojave National Preserve. Section 511, Utility Rights of Way, of the Act states, in part:

(a)(1) Nothing in this title shall have the effect of terminating any validly issued right-of-way or customary operation, maintenance, repair, and replacement activities in such right-of-way, issued, granted, or permitted to Southern California Edison Company, its successors or assigns, which is located on lands included in the Mojave National Preserve, but outside lands designated as wilderness under section 601(a)(3). Such activities shall be conducted in a manner which will minimize the impact on preserve resources.

(2) Nothing in this title shall have the effect of prohibiting the upgrading of an existing electrical transmission line for the purpose of increasing the capacity of such transmission line in the Southern California Edison Company validly issued Eldorado-Lugo Transmission Line right-of-way and Mojave-Lugo Transmission Line right-of-way...”

Management Objectives:

Perpetuate scenic and cultural landscapes. Landscapes should be free from activities and facilities that distract from the scenic beauty or the historic condition of the landscape. (p. 5)

Mojave National Preserve is a large expanse of natural Mojave Desert ecosystem. Managing the area to preserve this system as a self-sustaining environment where native species thrive is the overall management goal. Some existing land uses (pipelines, electric transmission lines, telephone relay sites, antennas, billboards, etc.) do not conform well with our preservation mission and management goals but are authorized pre-existing uses. These are identified here to recognize their existence as non-conforming uses that dissect the park and at times may interfere with the visitor experience. (p. 72)

The management philosophy towards these developments is to minimize their intrusion and manage towards their eventual elimination, either through technological improvements or acquisition. (p. 75).

5.1.2.1.8 U.S. Department of the Interior, National Park Service, Enjoy the View – Visual Resources Inventory Report: Mojave National Preserve

The National Park Service completed a visual resources inventory report for Mojave National Preserve according to the NPS inventory and evaluation methodology. Six views were included in the inventory, including Morning Star Mine, Ten Mile Tank, Eagle Well, Ivanpah Road, Keystone, and Connie’s Place. The Project is not located in close proximity to any of the viewpoints and no Project elements are included within the evaluated views.

5.1.2.1.9 U.S. Department of Transportation, National Scenic Byways Program

National Scenic Byways are designated for one or more of six "intrinsic qualities": archeological, cultural, historic, natural, recreational, and scenic. The program was established by Congress in 1991 to preserve and protect the nation's scenic but often less-traveled roads and promote tourism and economic development. The National Scenic Byways Program (NSBP) is administered by the Federal Highway Administration (FHWA).

Route 66 from Needles to Barstow, California was designated as a National Scenic Byway with the *Reviving America's Scenic Byways Act of 2019*. In Landscape Unit 3 the EPL Project crosses the historic Route 66/National Trails Highway where it parallels I-40.

5.1.2.1.10 U.S. Department of Transportation, Federal Aviation Administration

Generally, marking or lighting is recommended by the FAA for those spans or structures that exceed 200 feet in height above ground level (AGL); however, marking or lighting may be recommended for spans and structures that are less than 200 feet AGL, but located within close proximity to an airport or other high-density aviation environment.

The FAA has not made a determination regarding the lighting or marking of any component of the EPL Project.

5.1.2.2 State

5.1.2.2.1 California Department of Transportation, Scenic Highway Program

The State Scenic Highway Program—a provision of Sections 260 through 263 of the Streets and Highways Code—was established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a State Scenic Highway changes from “eligible” to “officially designated” when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives the designation from Caltrans. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways. However, State legislation is required.

State Scenic Highways within the project area are listed on Table 5.1-1 and shown on Figure 5.1-1.

5.1.2.2.2 California State Parks Office of Historic Preservation (OHP) California Landmarks and Points of Historic Interest

The OHP is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration, and protection of California's historic resources including California Historic Landmarks and Points of Historic Interest. These resources are buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, or technical, religious, experimental, or other historical value. The following points of historic interest are found near the Project:

Chimney Rock in the Granite Mountains, approximately 0.27 mile from Project, accessed via SR-18 and OHV route adjacent to shooting range.

[Not in view of Project, but accessed via roads that are crossed by Project:

Mojave Road Historical Marker, Kelso-Cima Road, (5.8 miles from Project crossing at Cima Road) and Cedar Canyon Road, leads to Camp Rock Springs Historical Landmark

Kelso Depot and Kelso Depot Restaurant and Employee Hotel Historical Marker (Kelbaker Road and Kelso Cima Road Junction) 11.3 miles south of Project crossing at Kelbaker Road.]

5.1.2.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the EPL Project. Pursuant to GO 131-D, Section XIV.B, “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by

public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities' regulations are not applicable as the county and cities do not have jurisdiction over the EPL Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.1.2.3.1 San Bernardino County General Plan

The majority of the project route lies within unincorporated areas of San Bernardino County. The San Bernardino County General Plan Conservation Element and Open Space Element contain the following:

GOAL D/CO 1. Preserve the unique environmental features and natural resources of the Desert Region, including native wildlife, vegetation, water and scenic vistas.

GOAL OS 5. The County will maintain and enhance the visual character of scenic routes in the County.

The Open Space Element of the General Plan indicates that county scenic routes in the Project area include SR-247, I-40, Route 66, and SR-18, as well as Cima Road, Ivanpah Road, and Kelbaker Road. Information regarding these designated scenic routes is included on Table 5.1-1 and on Figure 5.1-1.

5.1.2.3.2 City of Hesperia, City of Hesperia General Plan 2010

The easternmost portion of the project route near Lugo Substation traverses the city of Hesperia. The *City of Hesperia General Plan (2010)* contains general policies regarding aesthetics in order to provide attractive residential area, roadways, and open spaces. Scenic resources listed in the plan include Mojave River, San Gabriel and San Bernardino Mountains, the Mojave Desert, and other surrounding mountains and valleys, and the plan states that vistas toward these resources are valuable.

Additionally, an established equestrian trail is located within the Southern California Edison power line easement from the Burlington, Northern, and Santa Fe Railroad and Ranchero Road to the Mojave River, established by the Park District and dedicated in 1990.

Circulation Element:

Implementation Policy CI-1.14: Coordinate with San Bernardino County Flood Control District and Southern California Edison Company to promote utilization of easements for the trail system.

5.1.2.3.3 City of Boulder City, Nevada, Boulder City Master Plan

The Boulder City Master Plan (2015) identifies utility corridors in the Eldorado Valley area.

Public Facilities:

PF 6: ABOVEGROUND UTILITY PLAN

As required by NRS 278.0103 and 278.165, the city shall plan for the location of transmission lines designed and/or designated to operate at 200 kilovolts or greater to be consistent with any Bureau of Land Management resource management plan, any transmission plan adopted by the Nevada Office of Energy, and coordinated with the similar plans of adjacent jurisdictions. Utility providers shall locate transmission lines within established corridors as depicted on the Aboveground Utility Corridor Map, and in compliance with all zoning and permitting requirements. (p. 5-2).

Special Planning Area Policies – Eldorado Valley:

EV 3: VIEWS: The visual impacts of future development in the Eldorado Valley should be a strong consideration when reviewing future proposals for energy production facilities or other uses. Future

development should be designed so as to minimize negative impacts to views of the Eldorado Valley from the urbanized areas of the city.

5.1.2.3.4 Clark County, Nevada - Clark County Comprehensive Plan

Approximately 27 miles of the Project route travels through Clark County in Nevada. The Public Facilities and Services Element of the *Clark County Comprehensive Plan* (2014) contains policies regarding the aesthetics of utilities.

Policy UT 1-8 Support the reduction of visual impacts by newly constructed utility poles, towers, substations, and equipment buildings. Use methods for reducing the effect through actions such as:

- Disguising and co-locating antennas for cell towers
- Hiding equipment buildings with screening and solid fencing
- Use architecture design on major utility projects to complement the character of a community
- Place high-capacity electrical transmission lines underground to lessen visual impacts in large multi-use Projects

5.1.3 Impact Questions

5.1.3.1 Impact Questions

The significant criteria for assessing the impacts to aesthetics come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources within a state scenic highway, including, but not limited to trees, rock outcroppings, and historic buildings
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area

5.1.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.1.4 Impact Analysis

5.1.4.1 Visual Impact Analysis

5.1.4.1.1 Would the project have a substantial adverse effect on a scenic vista?

5.1.4.1.1.1 Construction

Less Than Significant Impact. For the purpose of this evaluation, a scenic vista is defined as a distant public view along or through an opening or corridor that is recognized and valued for its scenic quality.

There are no established scenic overlooks along roadways within the Project area. Teutonia Peak, located in the Mojave National Preserve, approximately 4 miles north of the EPL Project alignment, affords hikers

a panoramic view of Ivanpah Valley and surrounding mountains. A maintained trail provides access to the peak via an established trailhead and parking lot along Cima Road. Although the Project alignment is somewhat discernible from the summit in clear weather, for the most part the Project is barely perceptible to the naked eye from this location due to distance and the presence of atmospheric haze, a common occurrence in the area. Modifications to the portion of the Project segment visible from this viewpoint are limited to reconductoring and selective hardware replacement and Project related visual change would not be noticeable. Therefore, the impact would be less than significant.

5.1.4.1.1.2 Operations

No Impact. Operation and Maintenance (O&M) activities required for the EPL Project will not change from those currently required for the existing system; thus, no operation-related impacts to a scenic vista would occur.

5.1.4.1.2 Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

5.1.4.1.2.1 Construction

Less than Significant Impact. There are no designated state scenic highways within or within a view of the EPL Project area. The nearest Eligible State Scenic Highway is a portion of SR-38 located in the San Bernardino Mountains and designated as part of the Rim of the World Scenic Byway (a National Forest Scenic Byway). The Project comes within 17 miles of this section of highway and is not visible from this roadway. Eligible State Scenic Highways crossed by the Project include I-40 near the Pisgah Switchyard, and SR-247, north of Lucerne Valley. Proposed Project activity in the vicinity of the I-40 crossing would consist of reconductoring and affiliated modifications to existing structures. Due to distance (approximately 0.5 mile) the anticipated visual changes would not be discernible from the highway. No Project related visual impacts would occur at the SR-247 crossing because Project activities are not anticipated in the vicinity of this highway crossing.

The Project route also crosses and parallels several San Bernardino County designated scenic routes. Among them is historic Route 66 (National Trails Highway), which parallels I-40 at the Project crossing and, as outlined above travelers would not perceive EPL Project visual changes. The Project crosses SR-18 near the southern flank of the Granite Mountains, approximately 6 miles northeast of the city of Hesperia. Photograph 4 (Figure 5.1-3b) shows a portion of the Project alignment near the highway crossing. EPL Project activity in the vicinity of this highway crossing would include the introduction of a steel inter-set H-frame structure along the alignment approximately 650 feet east of the view shown in Figure 5.1-3b. The contrasting form of the new structure compared with the existing lattice structures shown in the photograph could be noticed by passing motorists. However, because the change would be seen within an existing landscape context of numerous contrasting unrelated transmission structures that are visible near the Project from this highway location, the appearance of the new Project structure would represent an incremental change that would not substantially affect views of the surrounding landscape.

Other county designated scenic routes include Kelbaker and Cima Roads, crossed by Project Segment 3 and Segment 4 within the Mojave National Preserve (Figures 5.1-3f and 5.1-3g). Planned Project activity in the vicinity of these highway crossings would be limited to replacing existing conductor with new, slightly smaller diameter conductor, resulting in only a minor incremental change. As demonstrated by the Figure 5.1-8b simulation and discussed in Section 5.1.4.4.3, when seen at close range by motorists, the visual effect of this change would be largely imperceptible.

Taken together, the incremental visual effects described above would not result in damage to existing scenic resources along scenic routes within the Project area, including a State Scenic Highway. Therefore, the impact is less than significant.

5.1.4.1.2.2 Operations

No Impact. Operation and Maintenance (O&M) activities required for the EPL Project will not change from those currently required for the existing system; thus, no operation-related impacts to existing scenic resources within a State Scenic Highway corridor would occur.

5.1.4.1.3 Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings?

5.1.4.1.3.1 Construction

Less than Significant Impact. Construction-related short-term visual impacts resulting from the temporary presence of equipment, materials, and work crews along the EPL Project alignment, staging and work areas, and stringing sites would not substantially degrade the existing visual character of the landscape. Given the widely dispersed and sparse permanent population within the majority of the Project work areas, close-range visibility of temporary construction activities by the public, outside of a few locations within and adjacent to the City of Hesperia, would be limited to short-term recreational OHV users and some motorists along area highways crossed by the Project.

Construction activities will take place over an approximately 23-month period, but this will be considerably shorter in duration at any one location. Because construction activities are anticipated to occur concurrently in some locations, duration at any given location would vary to some extent. Temporary construction areas along with staging areas, conductor stringing sites, and guard structures would generally be located within the existing EPL Project ROWs or easements, with the majority of temporary construction areas to be located near existing structures. Minor, temporary disturbance of land within and along the EPL Project alignment will occur at some staging and work areas during installation of inter-set structures and reconductoring activities, and in some cases will be located on previously disturbed land. With the exception of a small number of new spur roads that would be established for permanent access to new inter-set structures, existing access and spur roads would be used for construction of the EPL Project. Some would require rehabilitation similar to typical maintenance routinely performed along the access road network, including grading, minor vegetation removal and compaction of roadbeds. New spur roads would be 18-foot wide and adjacent ground disturbance would be minimized and rehabilitated as needed. In areas where access via established roads is limited or impractical, overland travel or use of helicopters may be used.

Construction work areas have been selected to minimize the trimming or removal of vegetation. Additionally, as a result of implementation of SCE's Wildfire Mitigation Plan, vegetation trimming or removal activities are anticipated to be limited in scope. In general, the visual effects of vegetation removal will be minor, and in the context of the characteristic low growing and generally sparse vegetation found in much of the Project's desert environment, not particularly noticeable to the public. As described in the HRP proscribed in Section 3.13.2.5.1, SCE would restore all areas that would be temporarily disturbed by construction, including staging yards, construction work areas and stringing sites, to as close to pre-construction conditions as feasible, and in so doing reduce any visual contrast within the landscape in areas where Project activities have taken place. As a result, any visual degradation of the landscape character resulting from temporary construction activity would be less than significant.

The EPL Project would result in incremental permanent visual change that would not substantially alter or degrade the existing visual character in the Project area. As detailed in Chapter 3, the EPL Project includes introducing 12 steel pole H-frame inter-set structures at various locations within the transmission alignment along EPL Project Segments 1 and 2. In addition, existing conductor and overhead groundwire would be replaced with new slightly smaller diameter non-specular conductor and new groundwire, and some existing ceramic insulators would be replaced with new glass (or polymer) insulators along portions of five EPL Project segments that are primarily located in sparsely populated areas of the Mojave Desert within California's San Bernardino County and Nevada's Clark County.

To varying degrees, the EPL Project will be seen from a limited number of residences in the City of Hesperia. Project modifications could also be potentially visible to motorists from a number of public roadways crossed by the Project, and to recreational users of publicly accessible unpaved off-road tracks located in proximity to the Project ROW.

In Landscape Unit 1, close-range views of the EPL Project would be available to both residents and motorists along a limited section of Ranchero Road, an arterial roadway in the City of Hesperia. As documented in Figure 5.1-5a and Figure 5.1-5b, before and after comparative views showing the Project near the alignment's roadway crossing, the new inter-set H-frame structure will be seen within an urban landscape that includes existing utility infrastructure such as adjacent and distant power and distribution lines, as well as noticeably larger, more visually complex transmission towers nearby. The Figure 5.1-5b simulation demonstrates that given the presence of established utility infrastructure in the vicinity, the introduction of the inter-set structure represents an incremental change that would not substantially alter or degrade the existing landscape or visual character along this urban corridor.

In Landscape Units 2 and 3, the EPL Project alignment crosses largely uninhabited portions of BLM and NPS administered land where public access is mainly restricted to recreational OHV users in sanctioned locations. In some instances, the introduction of the new steel pole H-frame inter-set structures within the existing EPL Project alignment will be seen within the context of numerous larger existing transmission structures along a non-EPL alignment that shares the Project ROW for much of its length, as illustrated in Photographs 5 and 8 (Figure 5.1-3c and Figure 5.1-3d). Existing and post-project views from KOP locations within BLM administered OHV areas in Figures 5.1-6a through 5.1-7b demonstrate that intervening landforms, backdrop conditions and viewing distance diminish the visibility of the EPL Project inter-set structures. This combination of visual conditions results in minimizing the potential degree of visual contrast of the EPL Project in the landscape.

Although introduction of new inter-set structures represents the most noticeable element of the EPL Project, they constitute a relatively small part of the EPL Project alignment subject to modification because of the small number of new structures and their limited distribution along the Project alignment. As detailed in Chapter 3, EPL Project activity will primarily involve reconductoring and limited replacement of insulators, where visual impacts would be largely unnoticed by potential viewers. Most of the reconductoring would take place within Landscape Unit 3 north of Pisgah Switchyard and within Landscape Unit 4, along approximately 106 miles of Project Segments 3 and 4, encompassing Mojave Trails National Monument and the Mojave National Preserve. The alignment primarily crosses unoccupied, desert terrain where public access in much of the area is constrained by topography. Views of the EPL Project in this area would potentially be available to OHV users along ROW access roads, where conductors and insulators would be seen at close-range. Other views of the EPL Project at close-range would be available to motorists along a small number of paved roadways crossed by the alignment within the eastern portion of the Mojave National Monument in Landscape Unit 4, where the reconductoring and insulator replacement would be largely imperceptible. Figure 5.1-8a and Figure 5.1-8b are a pair of

existing and post-project views from a KOP location along one of the main access routes into the Mojave National Monument crossed by the Project, and demonstrates that from a motorist's perspective, even when seen at close range, the difference in appearance of the existing and new conductor and OHGW would likely be imperceptible to motorists.

In light of the changes outlined above and summarized in Table 5.1-6 as well as demonstrated by the set of visual simulations from the four KOPs presented on Figures 5.1-5a through 5.1-8b, the EPL Project overall would result in incremental visual change that will not substantially alter or degrade existing visual character or quality in the area. Therefore, the impact would be less than significant.

5.1.4.1.3.2 Operations

No Impact. Operation and Maintenance (O&M) activities required for the project will not change from those currently required for the existing system; thus, no operation-related impacts to existing visual character would occur.

5.1.4.1.4 Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

5.1.4.1.4.1 Construction

Less than Significant Impact. Most construction will take place during daylight hours; however, at limited times some construction along the EPL Project alignment may be required or finished at night, and these activities will require lighting for safety. Any required lighting would be limited to an individual work area and would be temporary in nature. Staging yards may be lit for staging work and security; lighting would be directed on site and away from potentially sensitive receptors. As presented in Section 3.3.4.9, non-specular conductors and non-reflective insulators will replace existing components, and new galvanized steel inter-set structures would have dulled surfaces, thus reducing potential glare. Therefore, the EPL Project will not result in a substantial light or glare effect and the impact would be less than significant.

5.1.4.1.4.2 Operations

No Impact. Operation and Maintenance (O&M) activities required for the EPL Project will not change from those currently required for the existing system; thus, no operation-related impacts to existing visual character would occur.

5.1.4.2 Analysis of Selected Viewpoints

The information requested in the CPUC's *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* document is, as allowed in the Guidelines, contained in the Visual Resources Technical Report in Appendix I.

5.1.4.3 Visual Simulation

The set of visual simulations presented on Figures 5.1.5 through 5.1.8 documents the project-related visual changes that would occur at four KOPs and provides the basis for evaluating potential visual effects associated with the project from these key public views. The methodology employed for preparing the simulations includes the use of systematic site photography, computer modeling, and digital rendering techniques.

Photographs were taken using a full-frame digital camera with standard 50-millimeter lens or equivalent, which represents an approximately 40-degree horizontal view angle. Photography viewpoint locations

were documented in the field using photo log sheet notation, GPS recording, and basemap annotation. Digital aerial photographs and EPL Project design information supplied by SCE and Arcadis provided the basis for developing three-dimensional computer modeling of the new project components. For each simulation viewpoint, viewer location was input from GPS data using 5.5 feet as the assumed eye level. Computer “wireframe” perspective plots were overlaid on the simulation photographs to verify scale and viewpoint location. Digital visual simulation images were then produced based on computer renderings of the three-dimensional modeling combined with selected digital site photographs. The simulations presented on Figures 5.1.5 through 5.1.8 consist of two full-page images designated “a” and “b,” with the existing views shown in the “a” figure and the visual simulations in the “b” figure.

5.1.4.4 Analysis of Visual Change

This section includes description of the project-related change and an evaluation of potential visual effects on key public views. The set of visual simulations presented on Figures 5.1-5 through 5.1-8 documents the EPL Project-related visual change that would occur at four KOPs, and provides the basis for evaluating potential visual effects associated with the EPL Project with respect to these key public views. Key factors in determining the degree of visual change include the extent of change to the visibility of existing power lines, the degree to which the various project elements will contrast with or be integrated into the existing landscape, the extent of change in the landscape’s composition and character, and the number and sensitivity of viewers. BLM Visual Contrast Rating forms were completed for the KOPs. Included with the Visual Technical Report in Appendix I, the BLM forms provide an evaluation of EPL Project consistency with respective BLM visual management goals as outlined in Section 5.1.2.1.2 and Table 5.1-4.

Table 5.1-6, Summary of Visual Change at KOPs, presents an overview including viewpoint location with corresponding visual sensitivity factor(s); approximate viewing distance; and summary of visible change and potential effect that would occur each KOP location. As summarized in Table 5.1-6 and detailed under discussion of the four landscape units, the visual change associated with EPL Project modifications would not substantially alter existing visual conditions in the project area.

Table 5.1-6. Summary of Visual Change at KOPs

Photograph number and Location (Figure number)	Visual Sensitivity Factor(s)	Viewing Distance	Visual Change and Effect
LANDSCAPE UNIT 1			
2. Ranchero Road near Via Quintana looking east <i>(Figure 5.1-5)</i>	Proximity to nearby residences; Proximity to major roadway corridor	840 feet (0.16 mile)	Introduction of new inter-set structure between existing transmission towers. Minor increase in visual contrast against landscape backdrop results from introduction of new interest structures near roadway intersection. New structure is visible within an urban landscape context that includes many nearby utility poles with vertical, cylindrical form and horizontal cross arms that are related in form to the new inter-set structure. Surrounding vegetation partially screens residential views of new inter-set structure. Overall change would not substantially affect existing view from roadway and landscape character.
LANDSCAPE UNIT 2			
6. Red Cedar Ave near	BLM VRM Class IV	1,425 feet	Introduction of two new inter-set structures between

Table 5.1-6. Summary of Visual Change at KOPs

Photograph number and Location (Figure number)	Visual Sensitivity Factor(s)	Viewing Distance	Visual Change and Effect
Squaw Bush Rd looking east (Figure 5.1-6)	rating Proximity to largely unoccupied desert subdivision	(0.27 mile)	existing lattice transmission towers. Incremental increase in visual contrast as a result of new structures seen at close range against landscape backdrop. New structures are shorter and appear simpler in form compared with existing transmission structures. Overall change would not substantially alter existing view and landscape character.
7. Johnson Valley OHV Area near Power Line Road looking east (Figure 5.1-7)	BLM VRM Class IV rating Proximity to recreational area	980 feet (0.19 mile)	Introduction of two new inter-set structures between existing transmission towers. New structures are lower and appear simpler in form compared with taller, more visually complex existing transmission structures. Visibility of new structures is reduced from this KOP due to topographic screening and minimal contrast with landscape backdrop. Overall change would not substantially affect existing landscape character.
LANDSCAPE UNIT 4			
14. Cima Road looking northwest (Figure 5.1-8)	Within Mojave National Preserve San Bernardino County Scenic Route crossing Popular weekend route for regional motorists	600 feet (0.11 mile)	New smaller diameter conductor replaces existing conductor on Project LST structure visible from roadway. Replacement conductor and OHGW would likely not be noticeable to passing motorists. Overall change would not substantially affect existing motorist views or existing landscape character.

5.1.4.4.1 Landscape Unit 1

In Landscape Unit 1, close-range views of the EPL Project are available to motorists and residents within a limited portion of the City of Hesperia, suburban residents at the city's outskirts, and inhabitants of scattered rural residences located northeast of Hesperia, as well as to motorists along SR-18, which the alignment crosses.

Figure 5.1-5: Visual Simulation: Ranchero Road (VP 2)

Looking east along Ranchero Road, a major thoroughfare along the southern perimeter of the City of Hesperia, Figure 5.1-5 shows a close-range view of the EPL Project from the edge of a residential community. At this location the EPL Project consists of two parallel segments along a dedicated ROW; the alignment crosses the roadway at an intersection approximately 950 feet from this viewpoint and can be seen by motorists as well as nearby residents. Figure 5.1-5a shows existing EPL Project lattice towers on both sides of the roadway against a mountainous backdrop, with the tower in the foreground partially silhouetted against the sky. On the left side of the roadway, towers are seen amidst an array of dark wood utility poles, their visibility decreasing against a backdrop of similarly colored mountains. Various isolated wood utility poles are visible to the right of the roadway, and multiple overhead conductors span the

intersection in the left-center of the view. Dense stands of trees interspersed with residential driveways line the roadway on the left and can also be seen adjacent to residences on the right side of the view.

The Figure 5.1-5b simulation shows a new galvanized steel H-frame inter-set structure near the southwest corner of the intersection. The new structure is lower in height and simpler in form compared with the taller, more visually complex existing LST tower visible in the immediate foreground. While somewhat dissimilar to the taller, more visually complex existing transmission structures, the scale of the new inter-set H-frame structure as well as its vertical and horizontal components are more consistent with the scale and form of nearby existing utility poles. A comparison of Figures 5.1-5a and 5.1-5b demonstrates that the overall appearance of the new inter-set structure, seen within the context of this urbanized landscape intersection, does not fundamentally alter the view that includes transmission towers and numerous existing wood utility poles. The introduction of the new inter-set structure therefore represents an incremental effect that would not result in a substantial change in the existing landscape character at this location.

5.1.4.4.2 Landscape Unit 2

After crossing the Granite Mountains northeast of Hesperia, the EPL Project's parallel alignments (EPL Segments 1 and 2) enter the Lucerne Dry Lake basin, occupied by widely scattered residences and an area of farmland, where the alignments diverge before crossing SR-247. The sparsely vegetated, open desert landscape east of the highway is largely uninhabited. Vehicular access in this is largely restricted to unpaved power line maintenance roads as well as off-road vehicle tracks, concentrated in proximity to the BLM administered Johnson Valley and Ord Mountains OHV recreation areas and the Rodman Mountains Wilderness Area. Throughout Landscape Unit 2, the EPL Segment 1 and 2 alignments remain separated by up to approximately 4.75 miles.

Figure 5.1-6: Visual Simulation: Red Cedar Avenue (VP6)

Figure 5.1-6 shows the EPL Segment 2 alignment where it approaches the southwestern flank of the Ord Mountains, seen on the left. Looking east from upper Johnson Valley, this viewpoint is in an area under BLM jurisdiction with a Class IV designation. In the foreground left are remnants of a partially abandoned agricultural operation located within a largely uninhabited subdivision. To the left and not seen in the Figure 5.1-6a view a small number of scattered residential structures are located between approximately 0.75 mile and one mile from the viewpoint. In the immediate foreground near an unpaved powerline access road, an existing EPL Project tower is prominent against the sky, and more distant towers along the alignment are visible but less distinct when seen against the backdrop of the textured, dark colored Fry Mountains.

The Figure 5.1-6b simulation shows two new EPL Project inter-set structures beyond the foreground lattice tower seen at distances of 0.27 mile and 0.43 mile, respectively. The new structures are noticeably shorter in relation to the existing transmission towers, and only a small upper portion of the closest new inset structure is visible against the sky. The new structures' H-frame configuration appears more transparent than the existing towers with their more intricate latticework. Seen against a partial sky backdrop, the closest new inter-set structure with its double vertical pole framework and internal transparency displays less visual contrast compared to the complex lattice framework of the existing EPL Project tower in the immediate foreground. The simulation also demonstrates that with increasing distance, the difference between the existing and new structures' visibility is diminished due to weaker contrast with the texture and color of the landscape backdrop. Comparison of the Figure 5.1-6a and Figure 5.1-6b existing and simulation views indicates that differences in the overall form and texture between the existing transmission structures and new inter-set structures is incremental, and does not represent a significant change in the level of contrast and intactness within the landscape. Therefore, the introduction of the new inter-set structures would not be a substantial change in the existing landscape character at this location and falls well within the level of change allowed in the BLM Class IV designation.

Figure 5.1-7: Visual Simulation: Johnson Valley OHV Area (KOP 7)

North of the Ord Mountains, the EPL Segment 2 EPL Project alignment is shown in Figure 5.1-7a, a view looking east toward the junction of upper Johnson Valley and the Fry Mountains. This BLM VRM Class IV area is a popular destination for recreational motorists due to the abundant hilly terrain within BLM administered sanctioned OHV areas. In this area an unpaved access road can be seen skirting an alluvial wash; the numerous vehicle tracks in the immediate foreground are an indication of the area's considerable OHV activity. To the right a spur road leads to a nearby EPL Project lattice structure, situated on a low hill and prominent against a sky backdrop. Additional lattice towers are less noticeable as they recede toward the horizon, becoming indistinct where seen against the backdrop of mottled, multicolored terrain, or in some cases are partially screened by hilly topography.

The Figure 5.1-7b simulation shows two new EPL Project inter-set structures positioned midway between existing lattice towers near the center left of this view. Intervening topography screens more than half of the inter-set structure situated closest to the viewpoint, seen from a distance of approximately 1,020 feet, and only a portion of the crossbar and the tops of the vertical supports, which extend above the horizon line, are visible. Intervening topography also screens the lower portion of the more distant inter-set structure, with the upper portion barely visible against the heavily textured hillside backdrop seen in the distance. Although the simplified form of the H-frame structure of the new inter-set structures contrasts with the more numerous, uniform set of lattice towers along the alignment, this contrast is not pronounced and barely perceptible with increasing distance from the viewpoint. As a result, the introduction of the new structures represents an incremental change that would not substantially alter the landscape character in this location.

5.1.4.4.3 Landscape Units 3 and 4

In Landscape Units 3 and 4, the EPL Project alignment crosses largely uninhabited portions of BLM and NPS administered land where public access is mainly restricted to recreational OHV users in sanctioned locations. In these areas, EPL Project activity will primarily involve reconductoring and limited replacement of insulators, where visual impacts would be largely unnoticeable to potential viewers. Most of the reconductoring would take place within Landscape Unit 3 north of Pisgah Switchyard and within Landscape Unit 4, along approximately 106 miles of Project Segments 3 and 4, within Mojave Trails National Monument and the Mojave National Preserve. The alignment crosses mostly unoccupied, desert terrain where public access in much of the area is constrained by topography. In this area close range views of the EPL Project would potentially be available to OHV users along ROW access roads. In addition, close range motorists' views of the EPL Project would be available along a small number of paved roadways crossed by the alignment within the eastern portion of the Mojave National Monument in Landscape Unit 4, and the reconductoring and insulator replacement would be largely imperceptible from these locations.

Figure 5.1-8: Visual Simulation: Cima Road (KOP 14)

Figure 5.1-8 is a view looking north along Cima Road, one of four paved roadways crossed by the EPL Project within the Mojave National Preserve. This close-range motorist's view of the Project crossing shows a dense stand of Joshua Trees in the immediate foreground. The trees partially screen the lower portion of a pair of EPL Project structures and a non-EPL lattice tower sharing the Project ROW. The upper portion of the towers, along with numerous overhead conductors, are noticeable elements in the landscape, due to the contrast of their darker color against the uniform light sky backdrop.

The Figure 5.1-8b visual simulation depicts replacement of existing conductor on the EPL Project tower at the left side of this view with new, slightly smaller diameter conductor, along with OHGW at the top of the structure. The new, lighter weight conductor has slightly less sag than the existing conductor. A

comparison of the Figure 5.1-8a photograph and the Figure 5.1-8b simulation demonstrates that the EPL Project modifications would be largely imperceptible to motorists. The reconductoring of this portion of EPL Project Segment 3 represents a minor incremental change that would have little or no perceivable effect on the existing landscape character at this location.

5.1.4.5 Lighting and Marking

This is addressed in Section 3.3.5.2, Aviation Lighting and/or Marking.

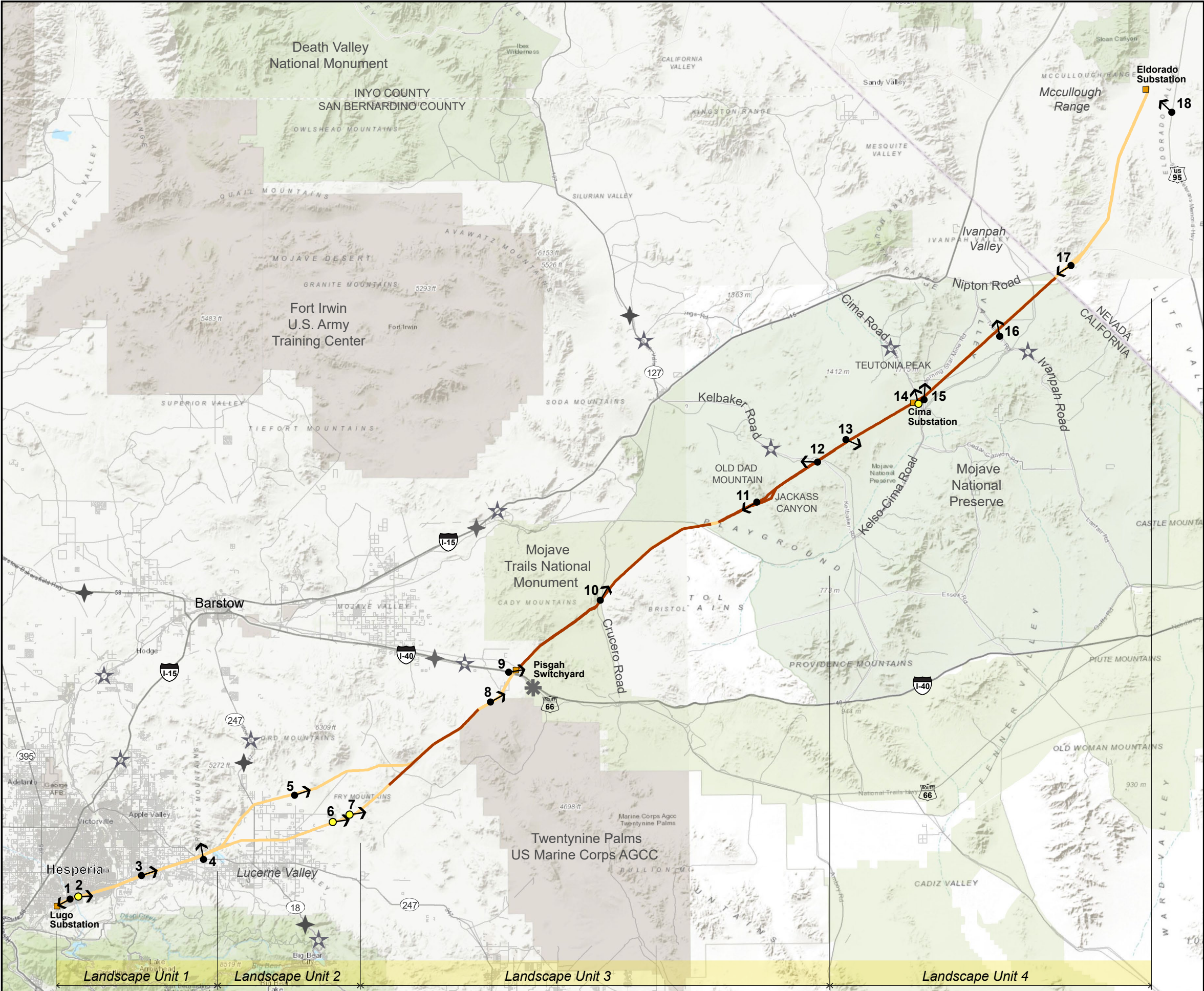
5.1.5 CPUC Draft Environmental Measures

SCE will implement, at the direction of the CPUC, the following Draft Environmental Measure during construction of the EPL Project:

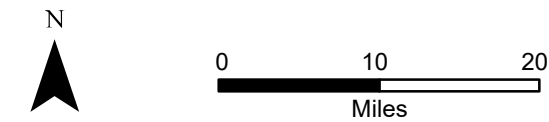
5.1 Aesthetics

Aesthetics Impact Reduction During Construction

All project sites will be maintained in a clean and orderly state. Construction staging areas will be sited away from public view where possible. Nighttime lighting will be directed away from residential areas and have shields to prevent light spillover effects. Upon completion of project construction, project staging and temporary work areas will be returned to pre-project conditions, including re-grading of the site and re-vegetation or re-paving of disturbed areas to match pre-existing contours and conditions.



- Legend**
- EPL Project Alignment
 - Existing Transmission Lines
 - Reconductor Portion
 - Substation
 - Roads and Highways
 - National Scenic Byway
 - Eligible State Scenic Highway
 - San Bernardino County Scenic Routes
 - Landscape Unit
 - Key Observation Point Location and Direction
 - Photograph Viewpoint Location and Direction



ENVIRONMENTAL VISION IMAGERY SOURCE: ESRI 2022

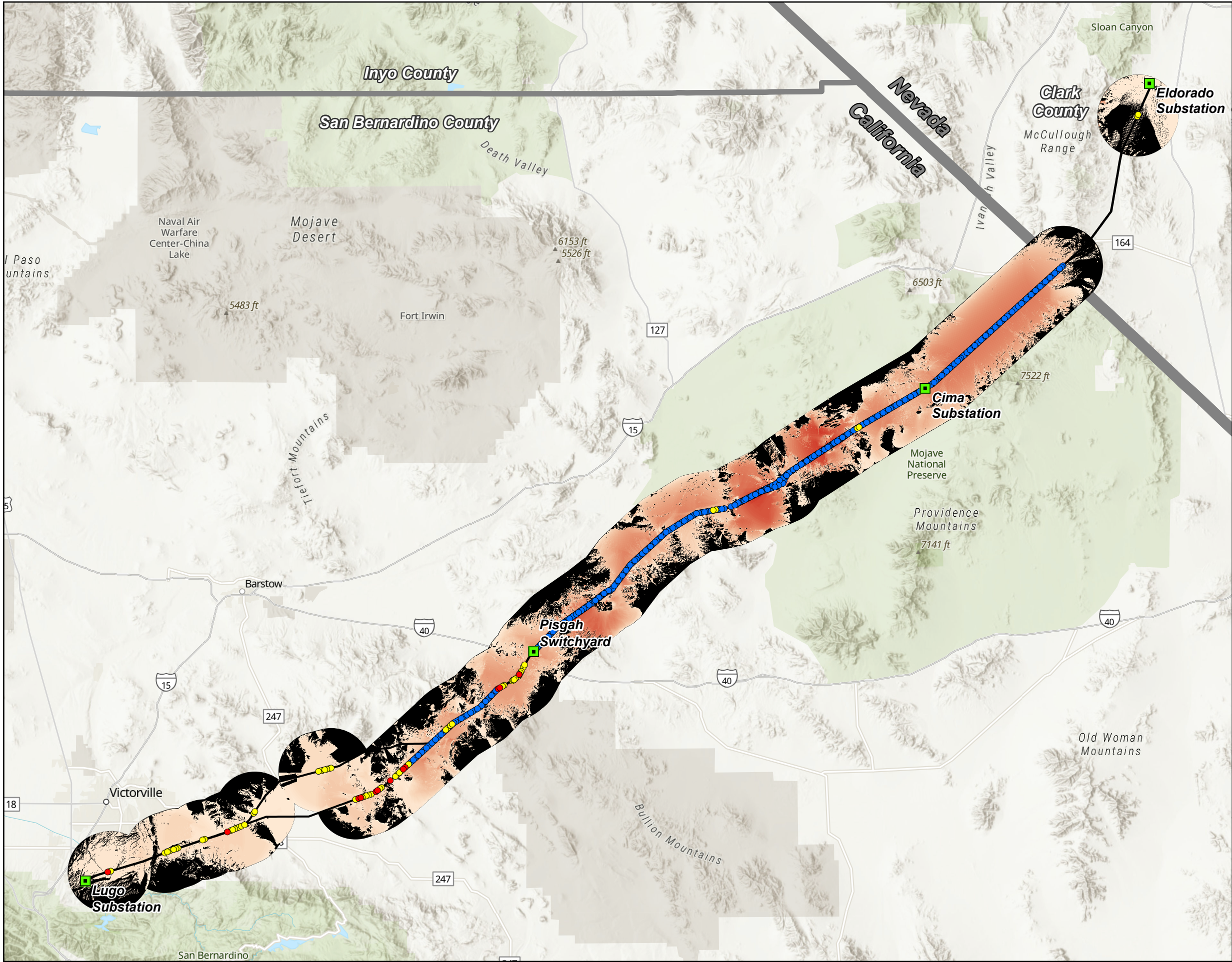
**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

PHOTOGRAPH VIEWPOINT LOCATIONS



FIGURE
5.1-1

T:_ENVSCISE_TLLR\ArcGIS_Pro\IEPL\Projects\Viewshed analysis.aprx|Figure 5-1-2 - Viewshed Analysis • 2/25/2023 • CMHickma



Legend

- State boundary
- County boundary
- Substation
- EPL project alignment

Structures with Proposed Work (522)

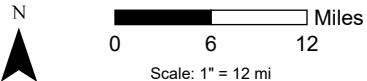
- Intersect (12)
- Hardware replacement (64)
- Reconductor (448)

Structure Visibility

- 71 structures visible
- 1 structure visible
- No structures visible

Notes

• Base map source: ESRI World Topographic Map.



**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

VIEWSHED ANALYSIS



1. Cottonwood Avenue looking southwest towards Lugo Substation



*2. Ranchero Road near Via Quintana looking east

* KOP; see Figure 5.1-5 for visual simulation
Refer to Figure 5.1-1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220 kV PROJECT

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3a**



3. Roundup Way at Wikiup Way looking northeast



4. SR-18 looking north

Refer to Figure 5.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3b**



5. Harrod Road in Ord Mountain OHV area looking northeast



*6. Red Cedar Ave. near Squaw Bush Rd. looking east

Refer to Figure 5.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3c**



*7. Johnson Valley OHV Area near Power Line Road looking east



8. Powerline Road near Rodman Mountains Wilderness Area looking northeast

* KOP; see Figure 5.1-7 for visual simulation
Refer to Figure 5.1-1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220 kV PROJECT

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3d**



9. I-40/National Trails Highway looking northeast towards Pisgah Switchyard



10. Crucero Road in Mojave Trails National Monument looking northeast

Refer to Figure 5.1-1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220 kV PROJECT

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3e**



11. Jackass Canyon OHV route southwest of Old Dad Mountain looking southwest



12. Kelbaker Road looking west

Refer to Figure 5.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3f**



13. Mojave Road OHV route looking southeast



*14. Cima Road looking north

* KOP; see Figure 5.1-8 for visual simulation
Refer to Figure 5.1-1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220 kV PROJECT

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3g**



15. Morningstar Mine Road looking north



16. Ivanpah Road looking north

Refer to Figure 5.1-1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220 kV PROJECT

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3h**



17. Nipton Road/SR-164 looking southwest



18. US-95 looking northwest towards Eldorado Substation

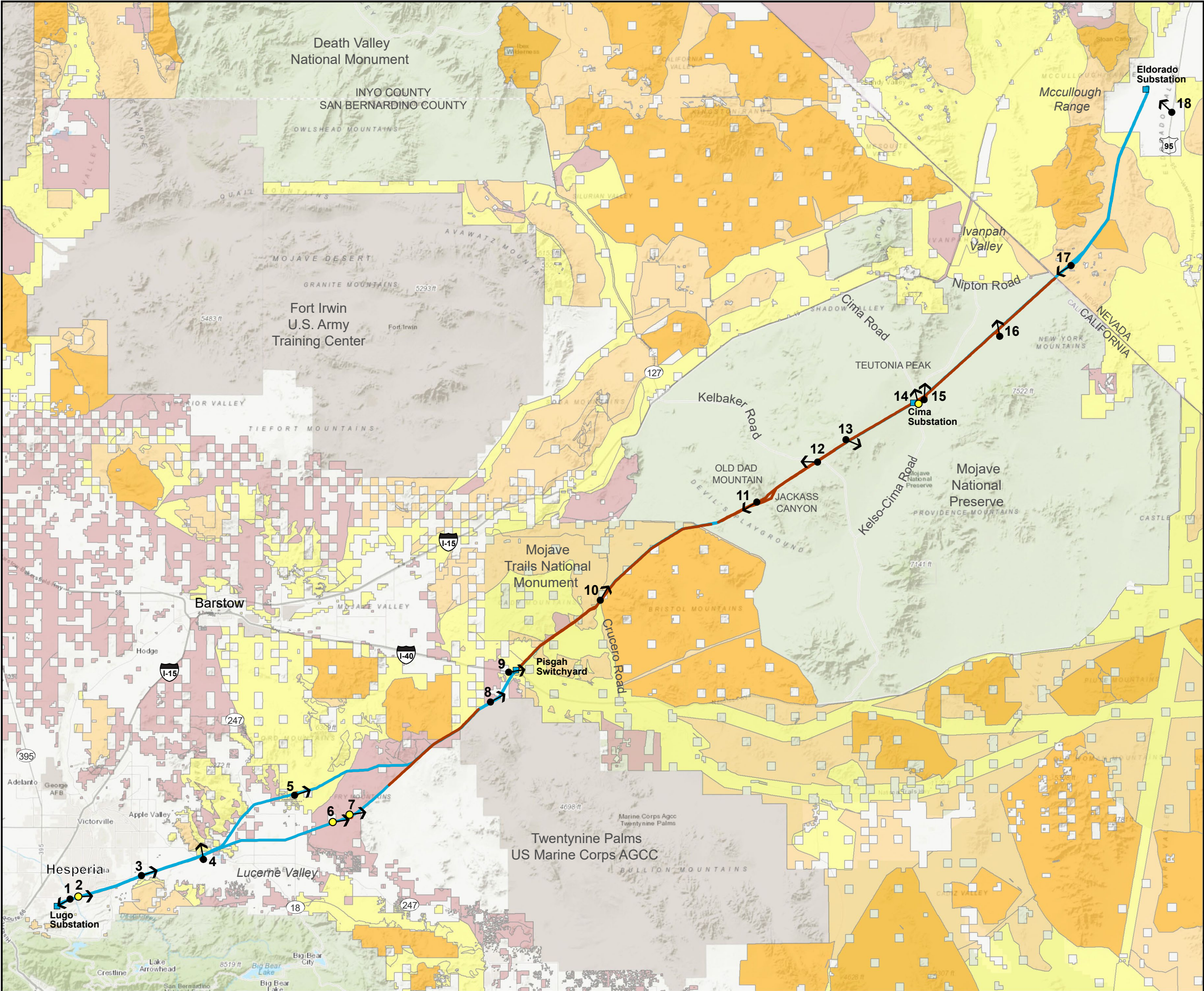
Refer to Figure 5.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

REPRESENTATIVE PHOTOGRAPHS



**FIGURE:
5.1-3i**

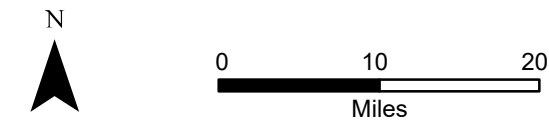


Legend

- EPL Project Alignment
- Existing Transmission Lines
- Reconductor Portion
- Substation
- Key Observation Point Location and Direction
- Photograph Viewpoint Location and Direction

BLM VRM Classifications

- Class I
- Class II
- Class III
- Class IV



ENVIRONMENTAL VISION IMAGERY SOURCE: ESRI 2022

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

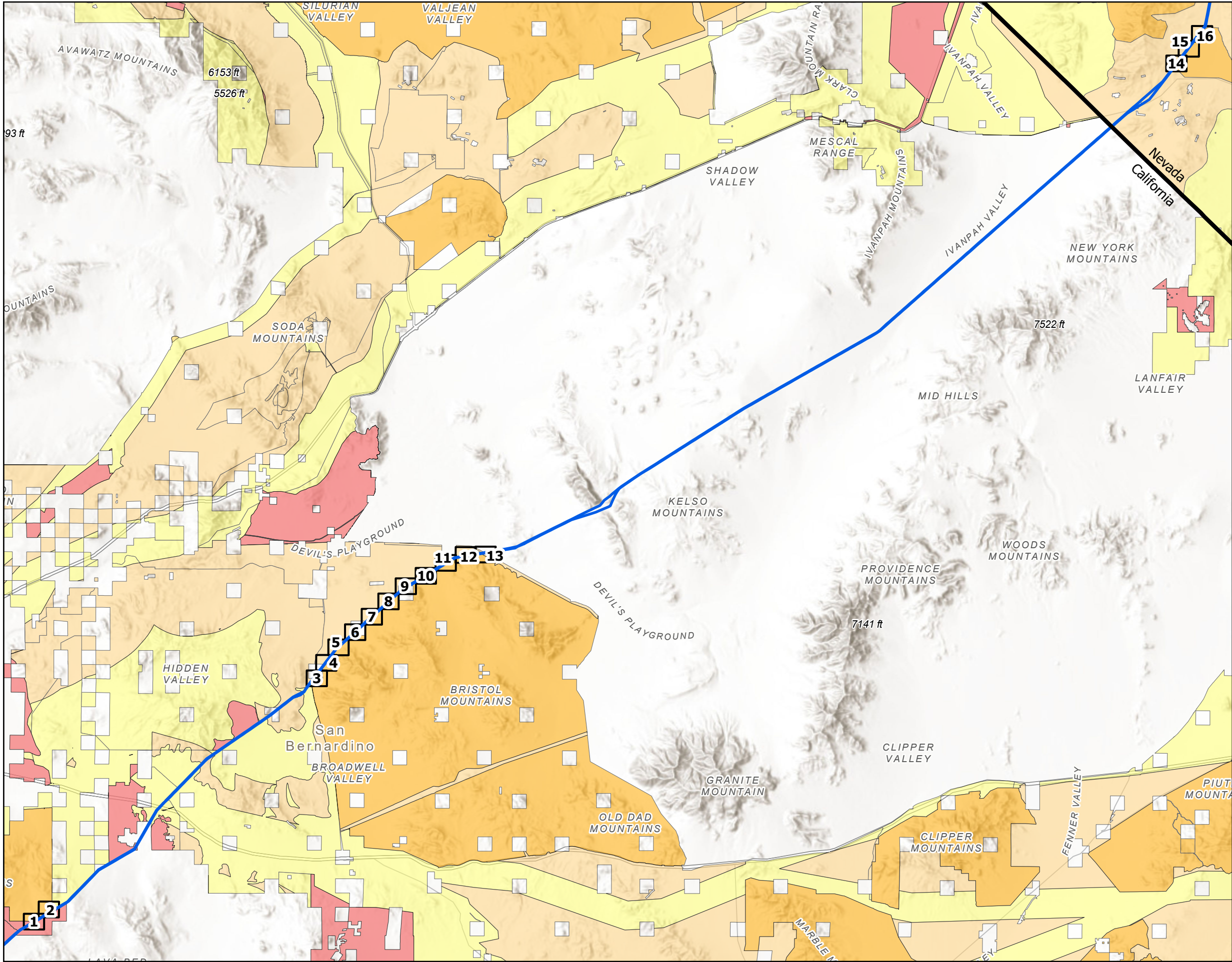
BLM VRM CLASSIFICATIONS



An EDISON INTERNATIONAL Company

**FIGURE
5.1-4**

T:\ENVISCEISCE_TLLR\ArcGIS_Pro\EPL\Projects\BLM VRM area crossings\2022-06\EPL BLM VRM area crossings.aprx|Fig. 5.1-4a_index • 2/16/2023 • TPoitras



Legend

- BLM VRM Index Pages
- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV

N

0 5 10 Miles

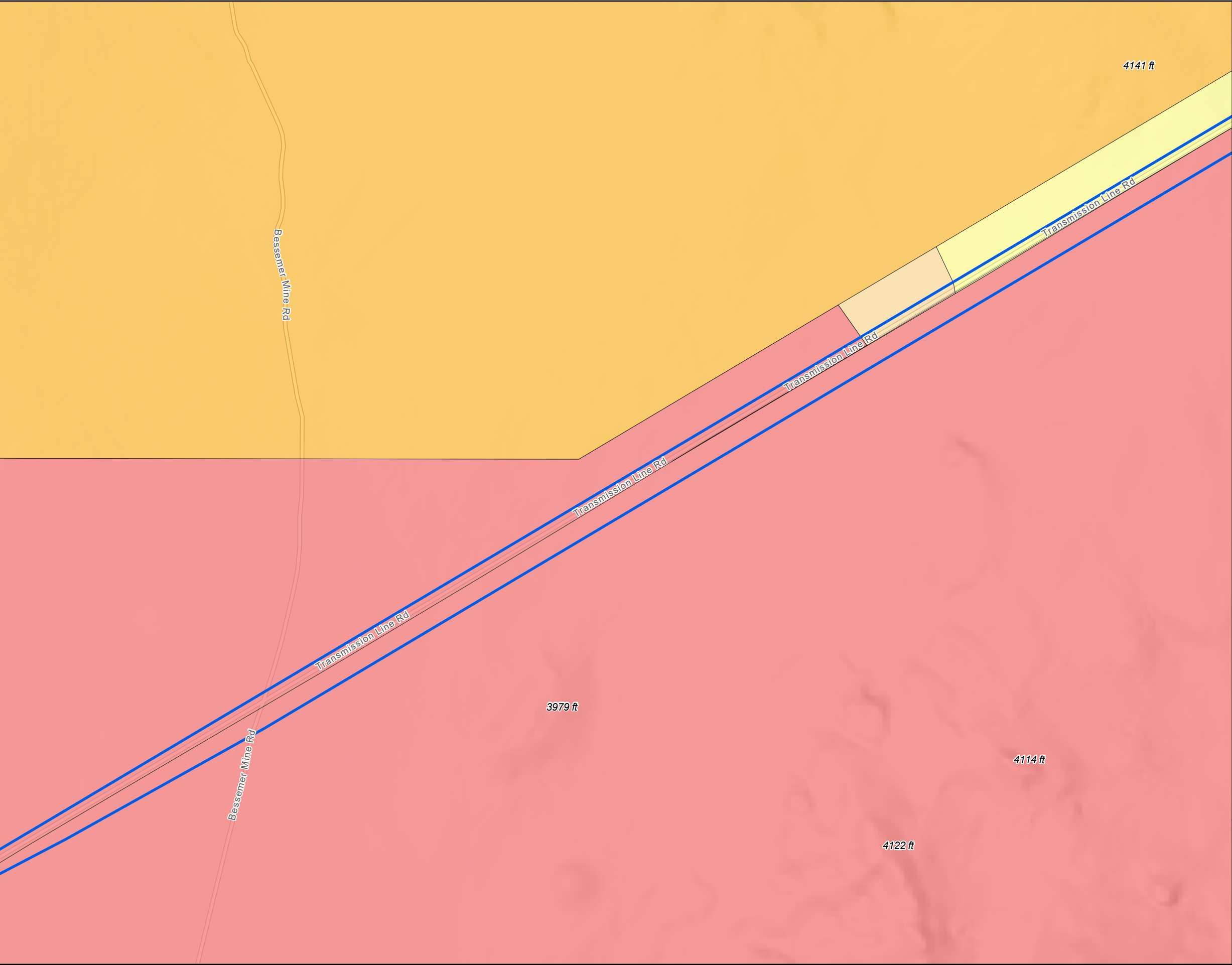
**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

**BLM VRM CLASSIFICATIONS
MAP INDEX**

ARCADIS

SOUTHERN CALIFORNIA
EDISON
An EDISON INTERNATIONAL Company

**FIGURE
5.1-4a**



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV



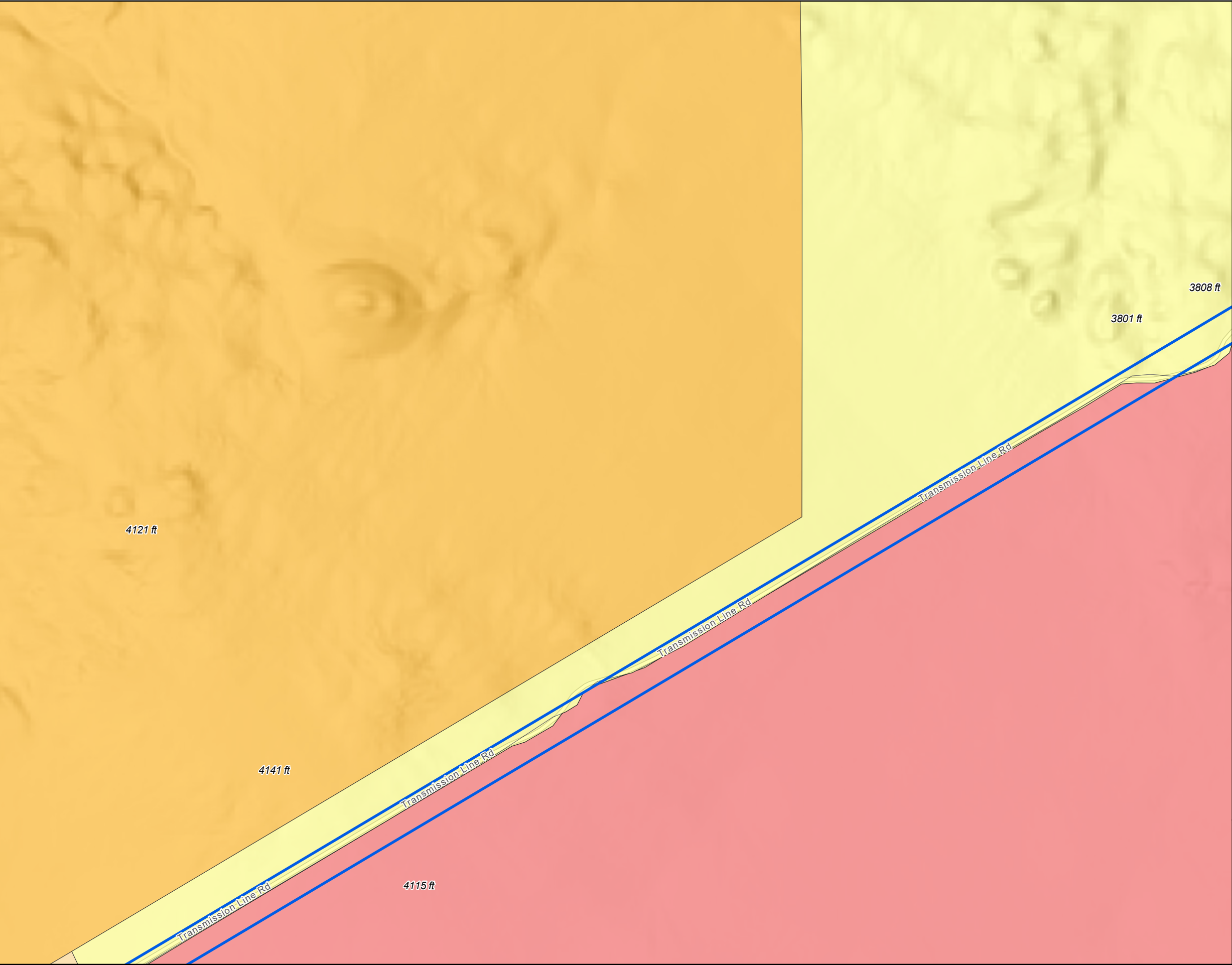
ELDORADO-PISGAH-LUGO
220 kV PROJECT

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-1

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Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV



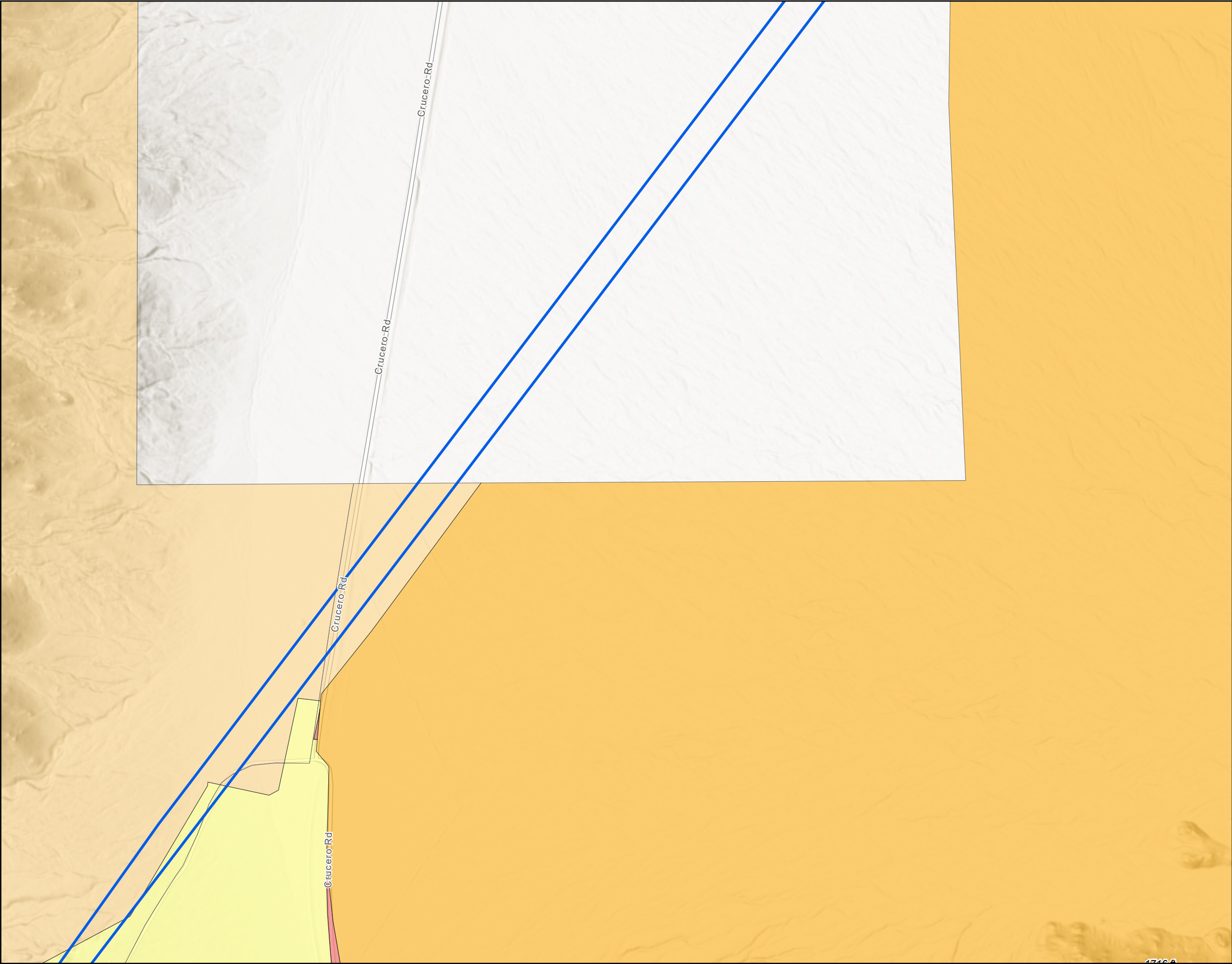
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**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-2



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV



ELDORADO-PISGAH-LUGO
220 kV PROJECT

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-3



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV



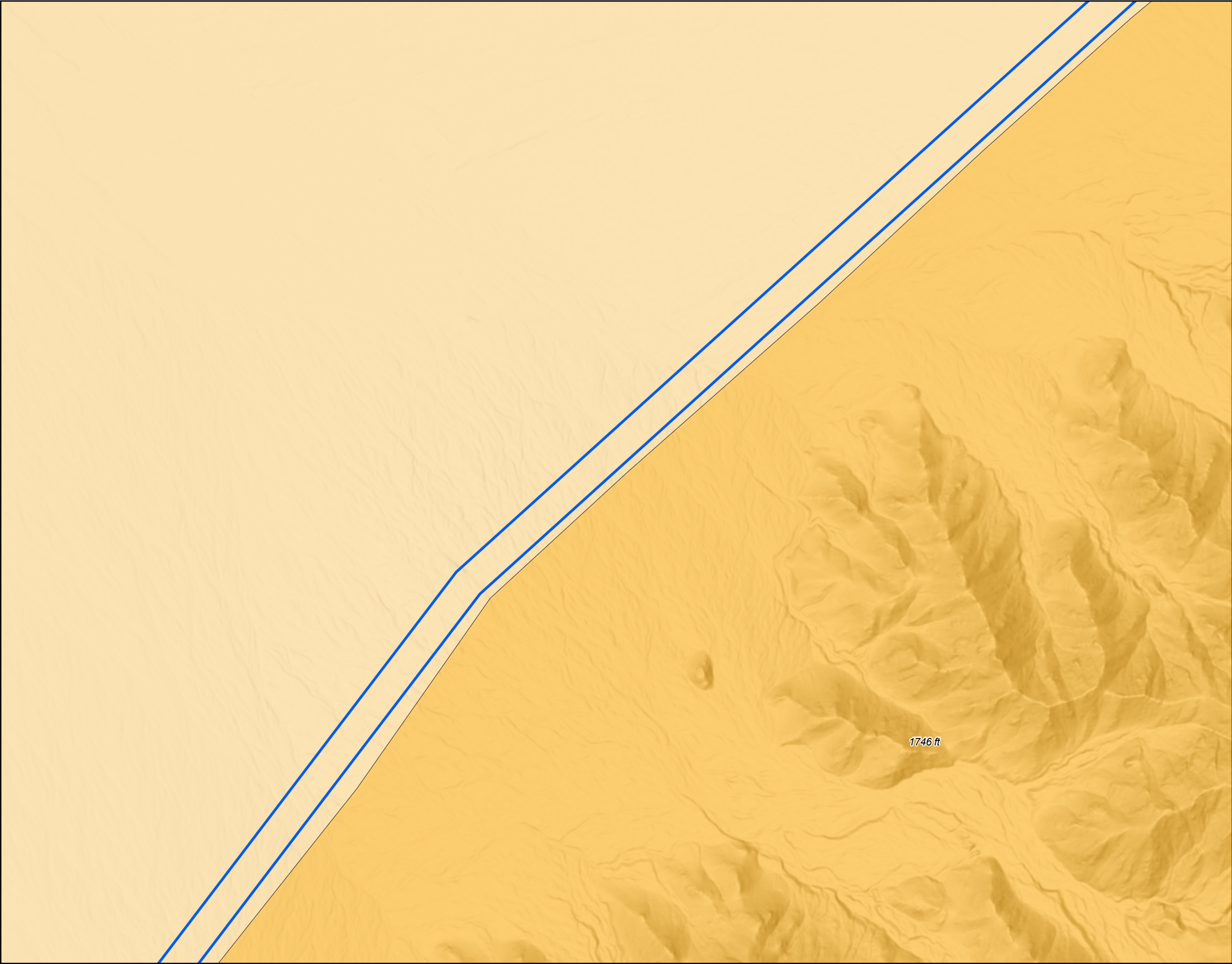
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**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-4



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV

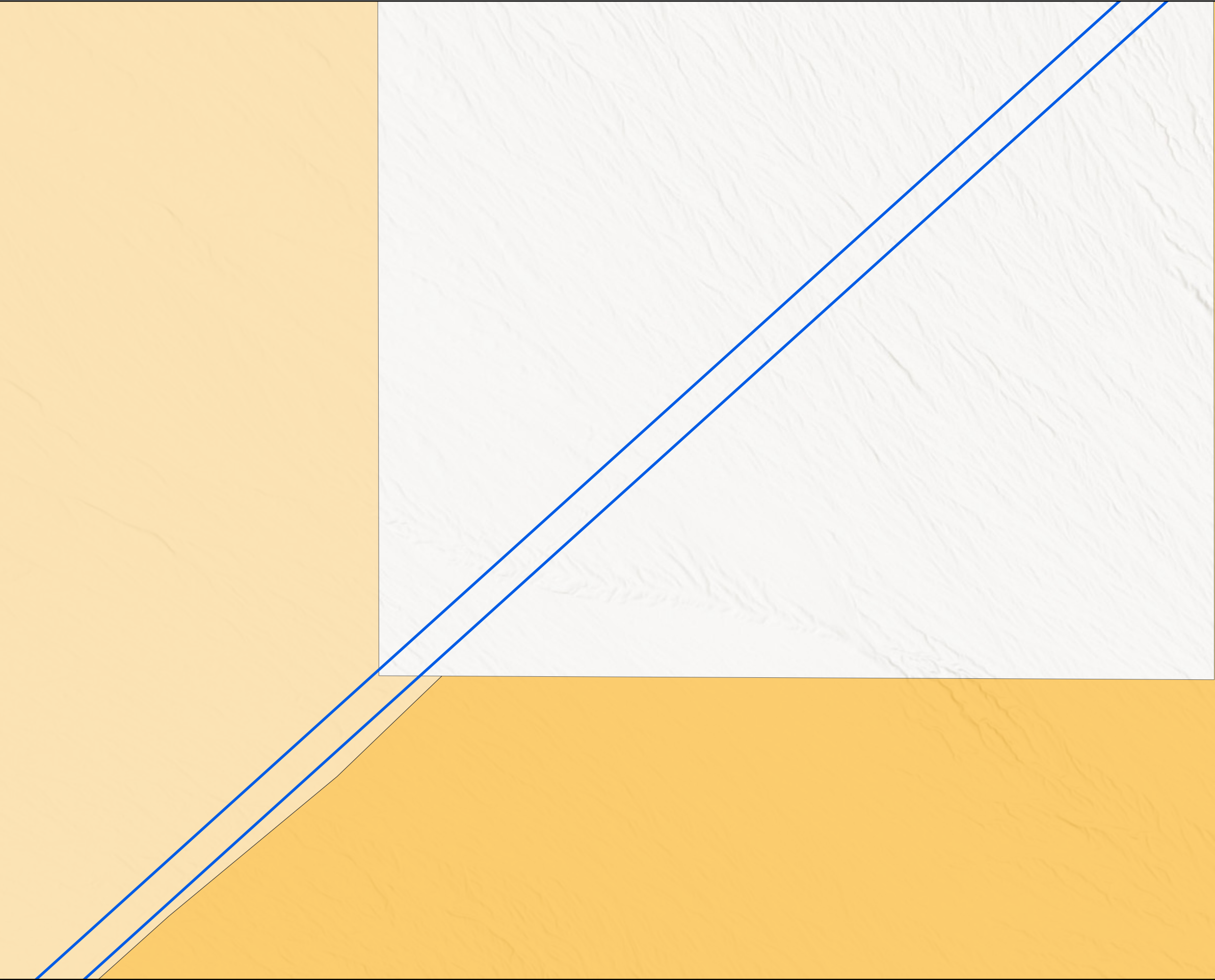


**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



**FIGURE
5.1-4a-5**



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV



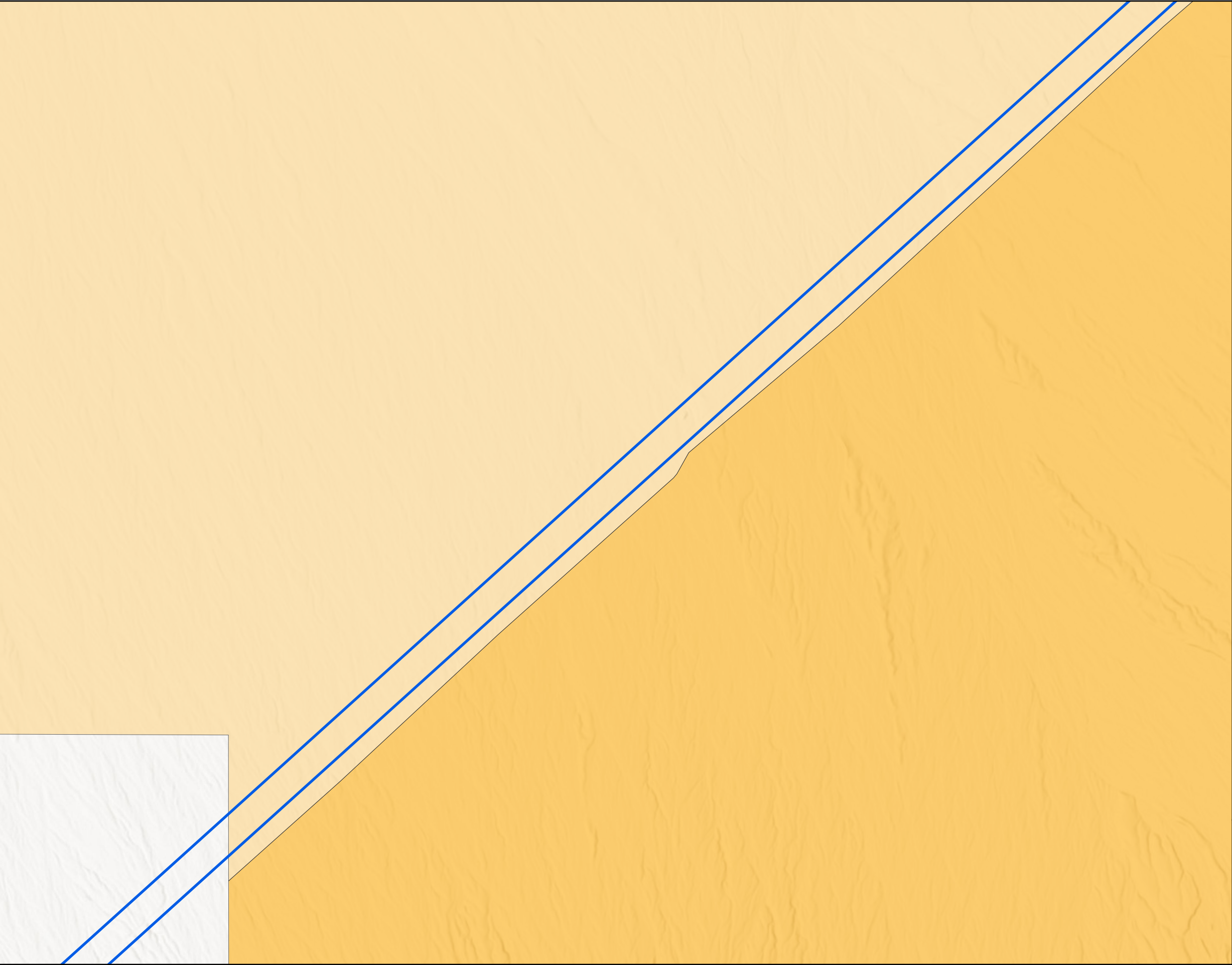
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**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-6



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV



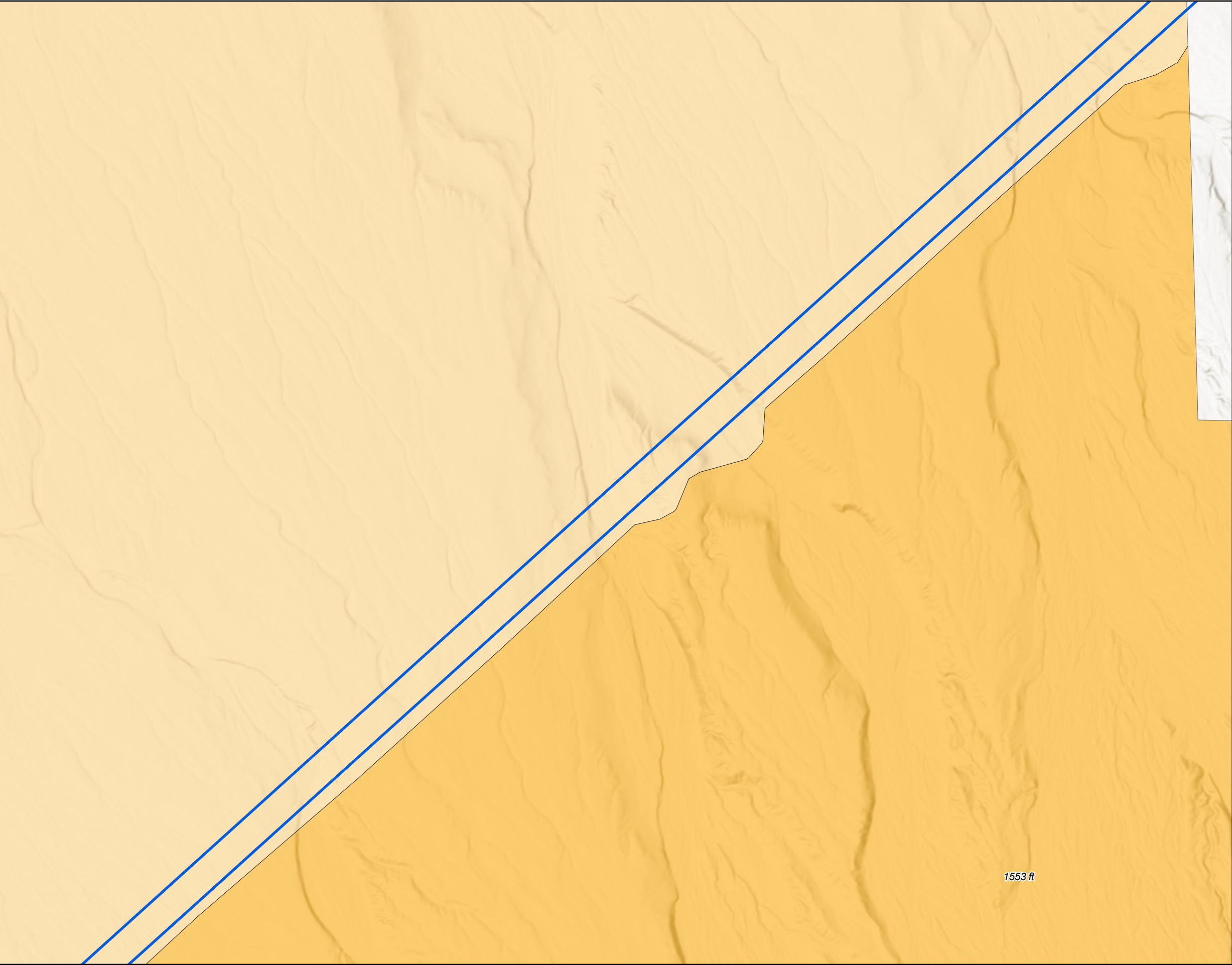
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**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-7



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV



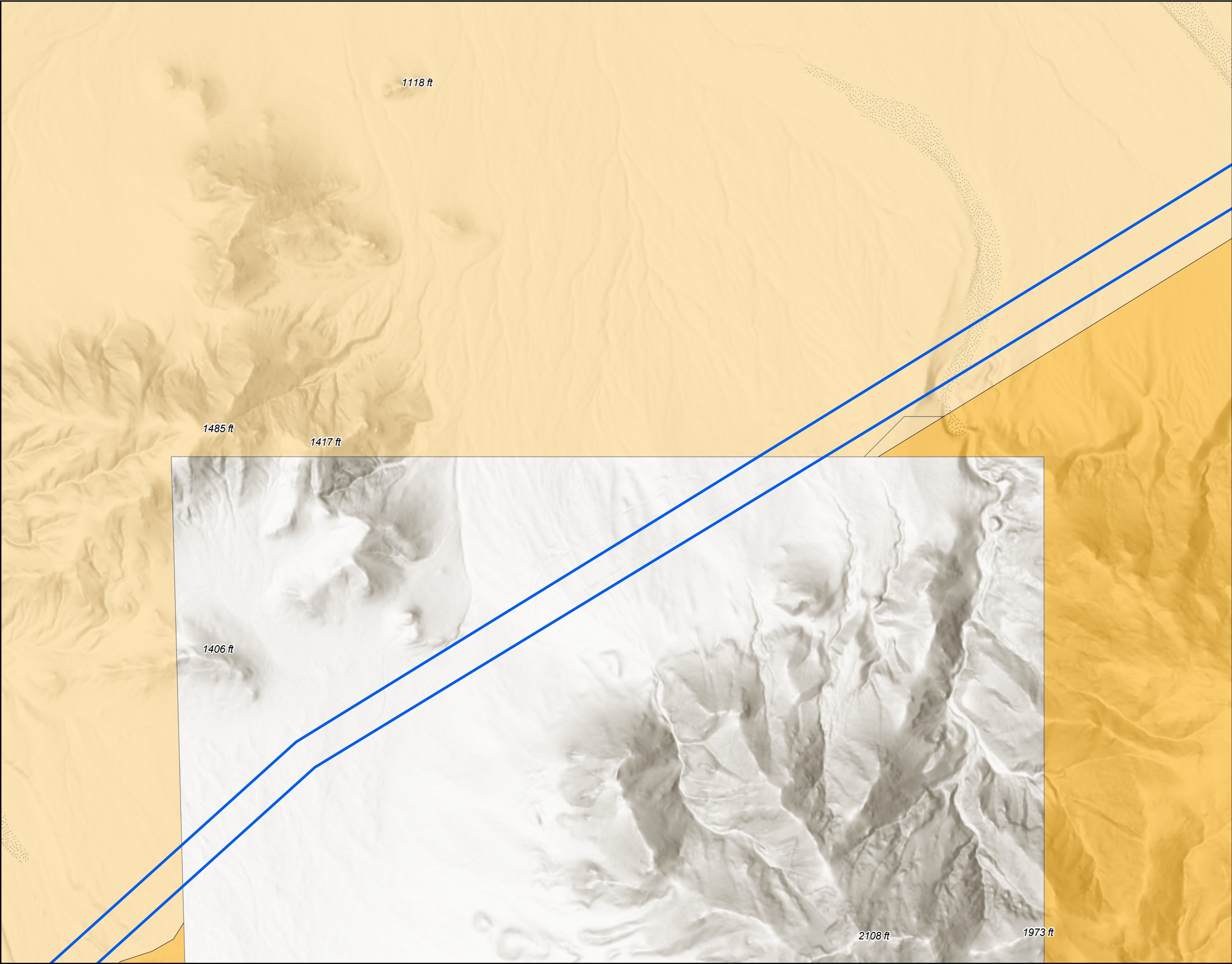
0 500 1,000 Feet

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-8



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV

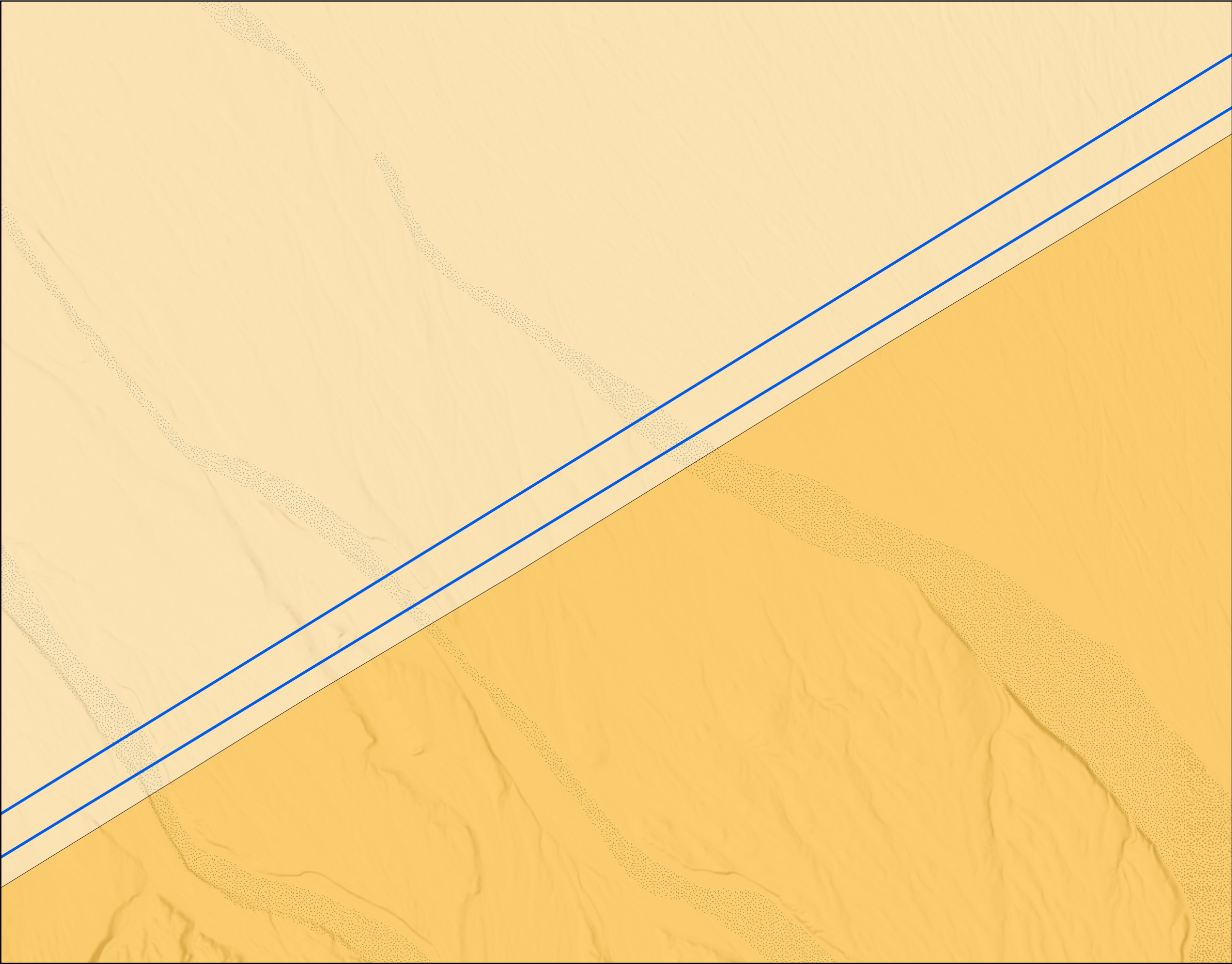


**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



**FIGURE
5.1-4a-9**



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV

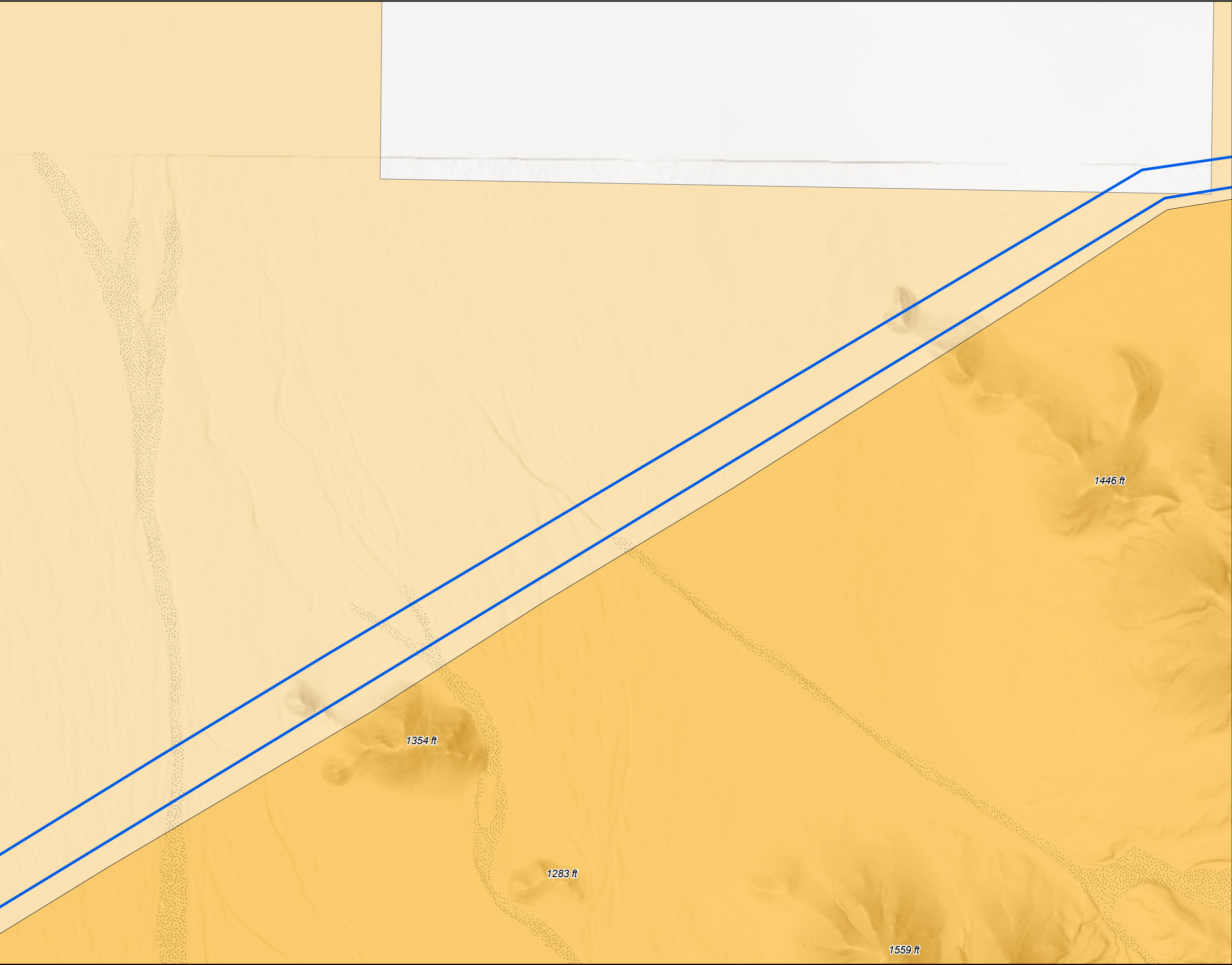


**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



**FIGURE
5.1-4a-10**



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV



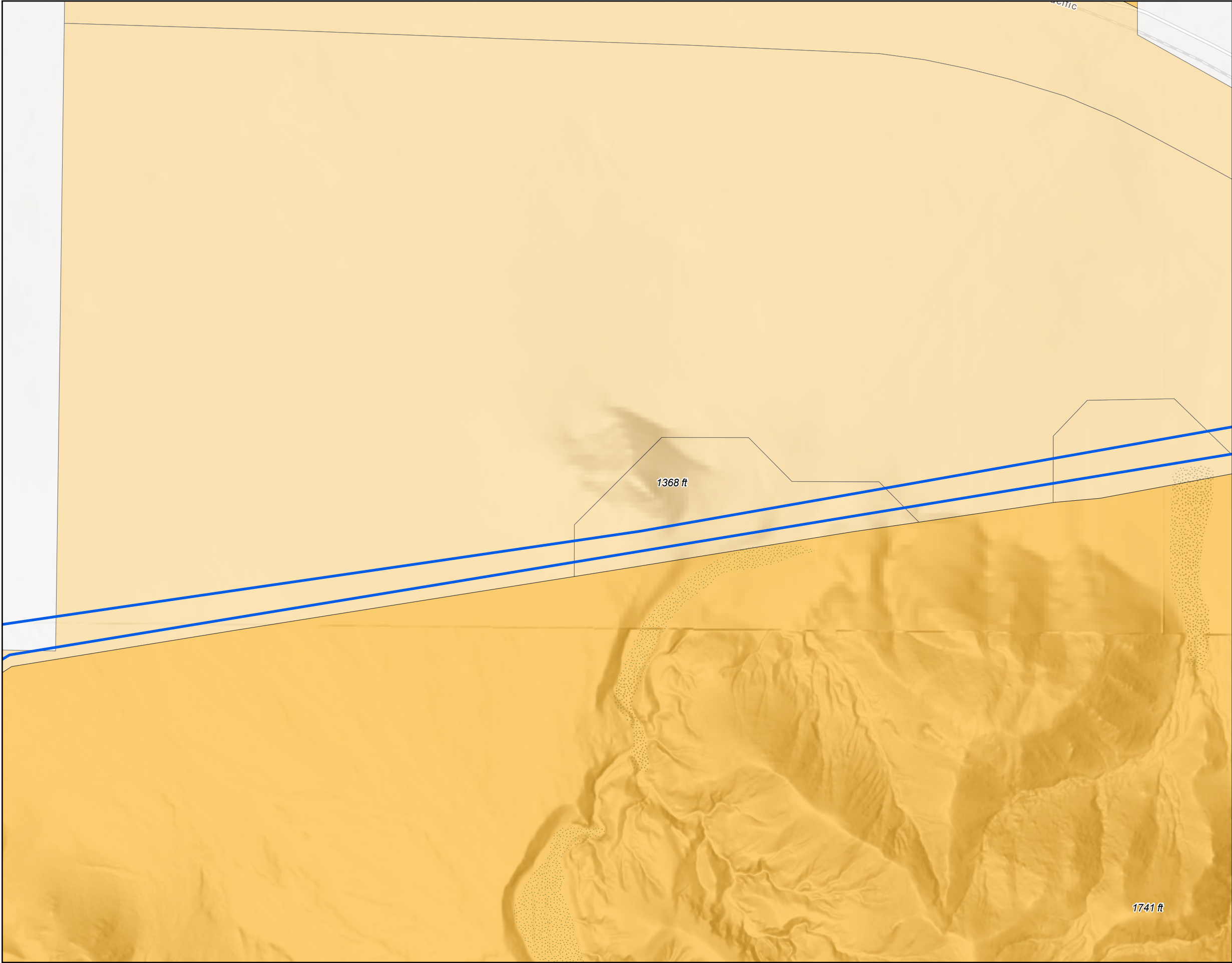
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**ELDORADO-PISGAH-LUGO
220 kV PROJECT**






BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-11



Legend

-  EPL Project Alignment
-  BLM VRM Class I
-  BLM VRM Class II
-  BLM VRM Class III
-  BLM VRM Class IV



0 500 1,000 Feet

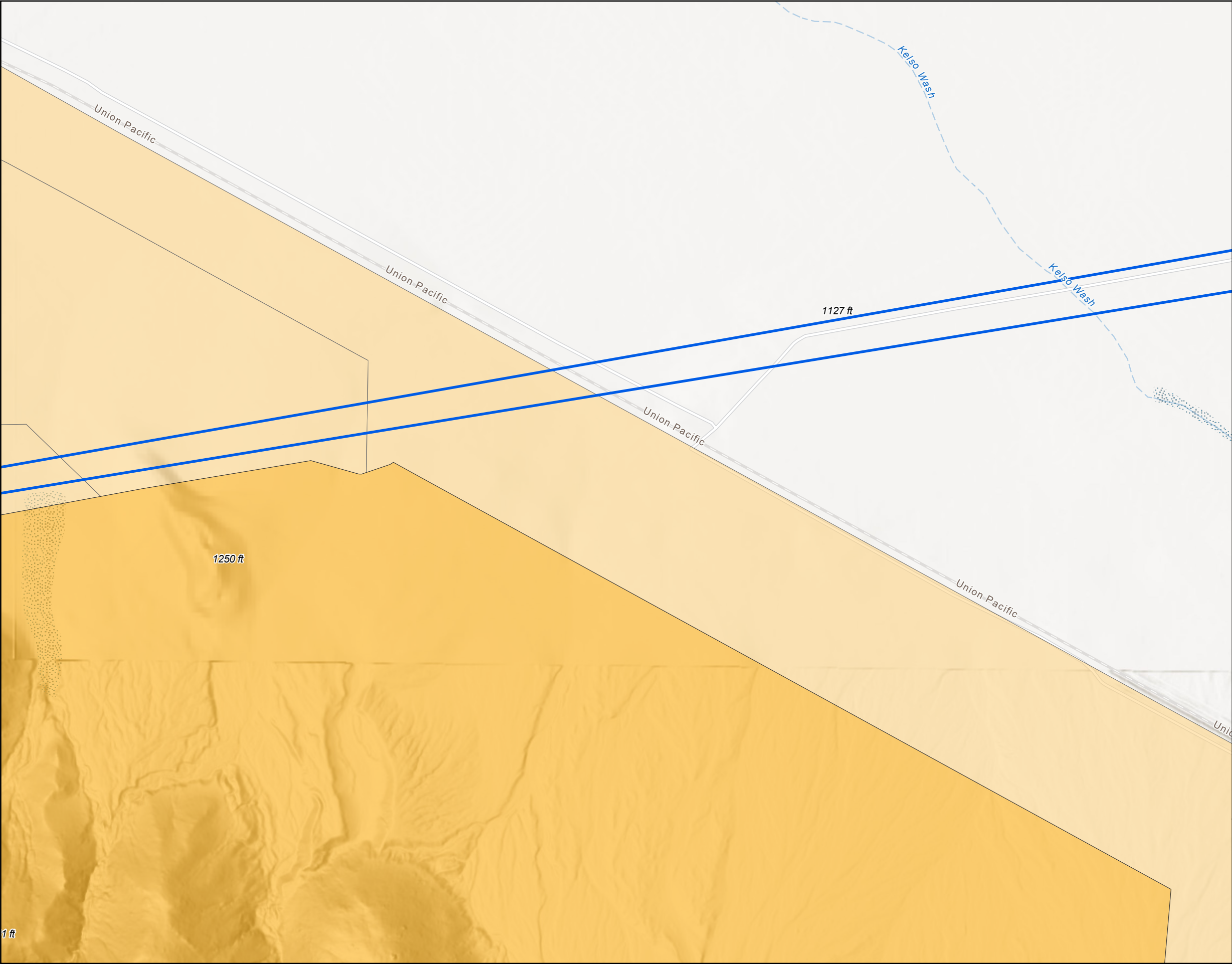
**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-12

T:_ENVISCEISCE_TLLR\ArcGIS_Pro\EPL\Projects\BLM VRM area crossings 2022-06\EPL BLM VRM area crossings.aprx|Fig. 5.1-4a • 2/16/2023 • TPoitras



Legend

- EPL Project Alignment
- BLM VRM Class I
- BLM VRM Class II
- BLM VRM Class III
- BLM VRM Class IV

N



0 500 1,000 Feet

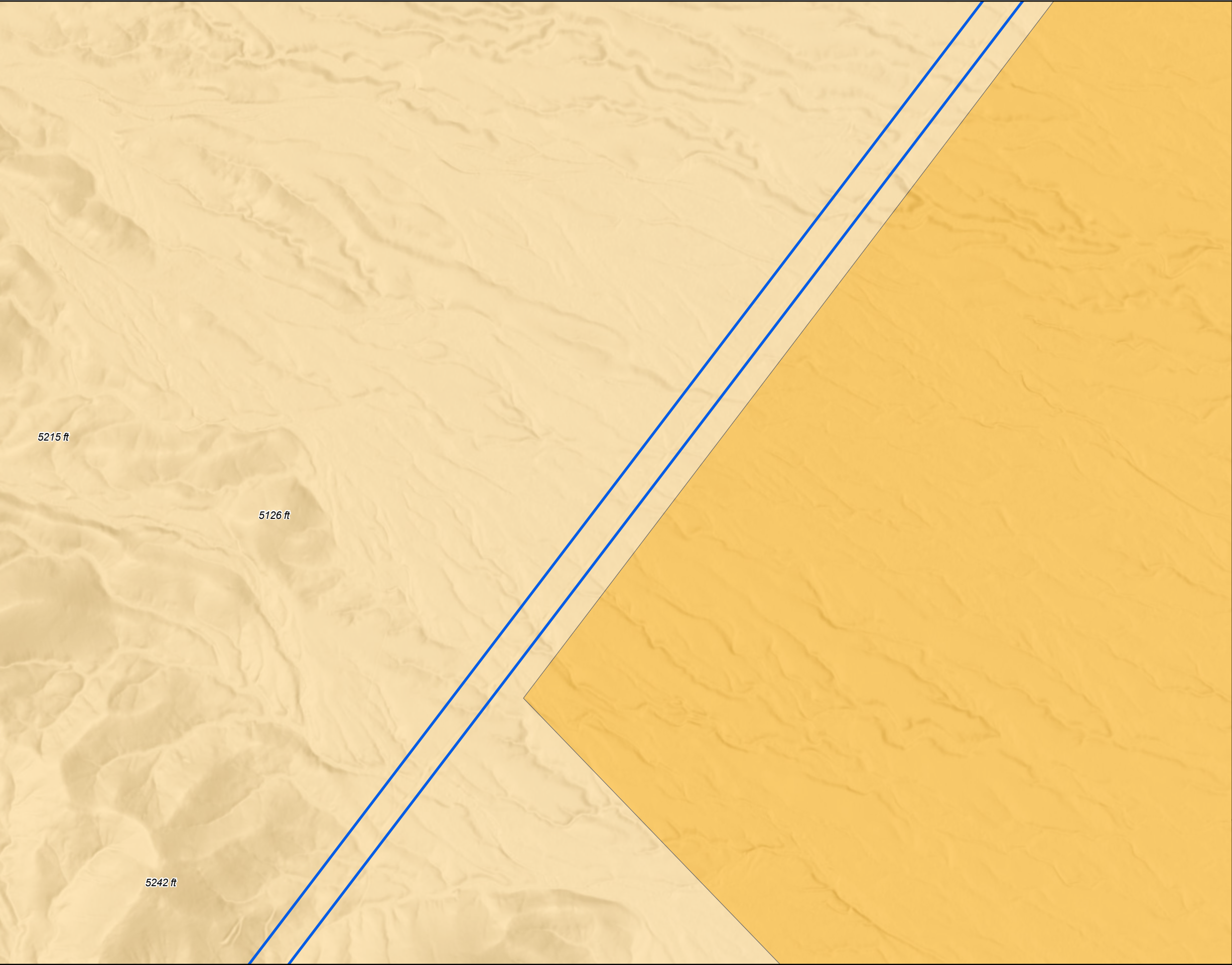
**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS








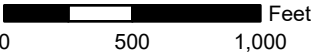
FIGURE
5.1-4a-13

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Legend

-  EPL Project Alignment
-  BLM VRM Class I
-  BLM VRM Class II
-  BLM VRM Class III
-  BLM VRM Class IV

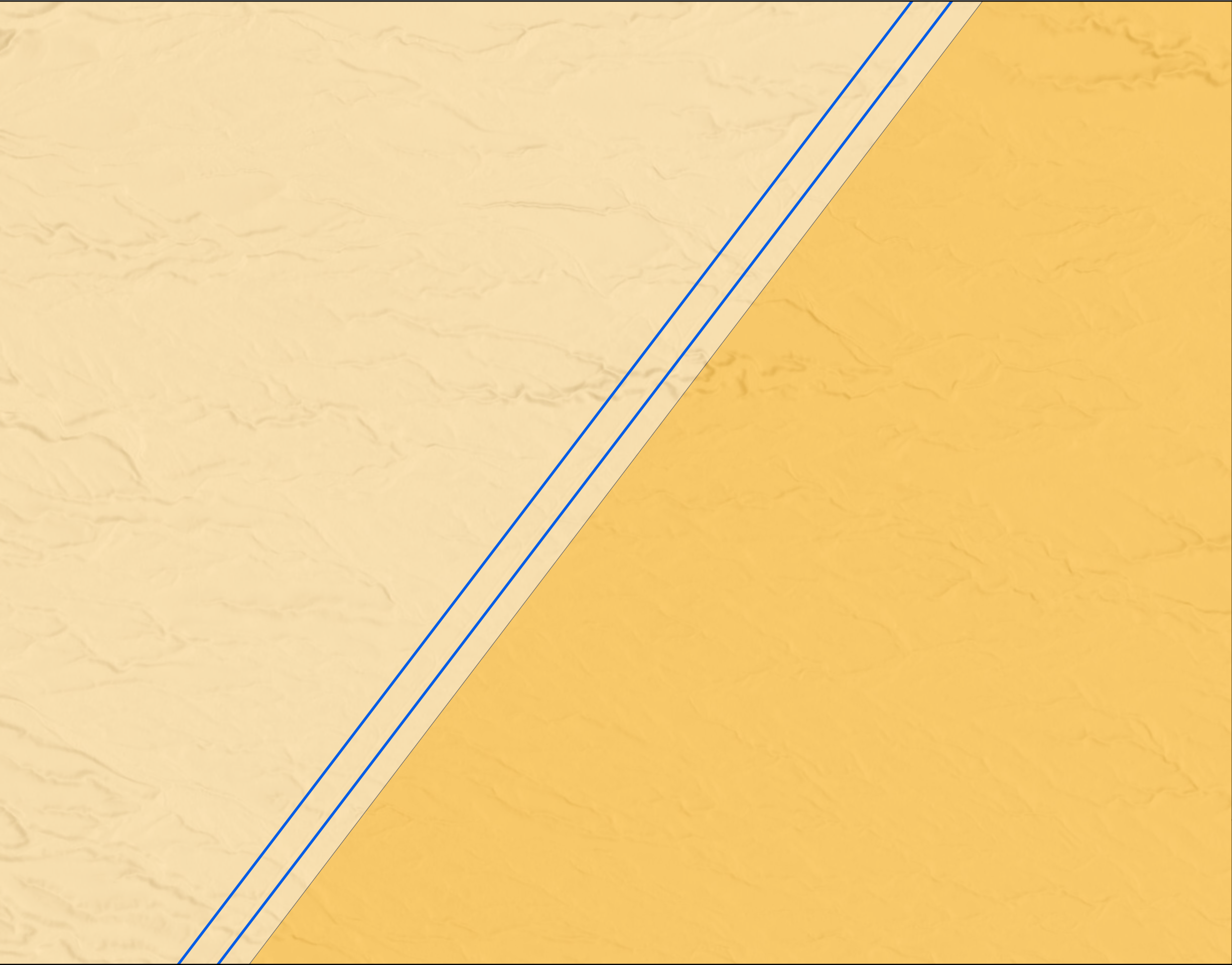


**ELDORADO-PISGAH-LUGO
220 kV PROJECT**






BLM VRM CLASSIFICATIONS

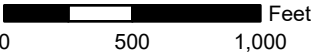


FIGURE
5.1-4a-14



Legend

-  EPL Project Alignment
-  BLM VRM Class I
-  BLM VRM Class II
-  BLM VRM Class III
-  BLM VRM Class IV

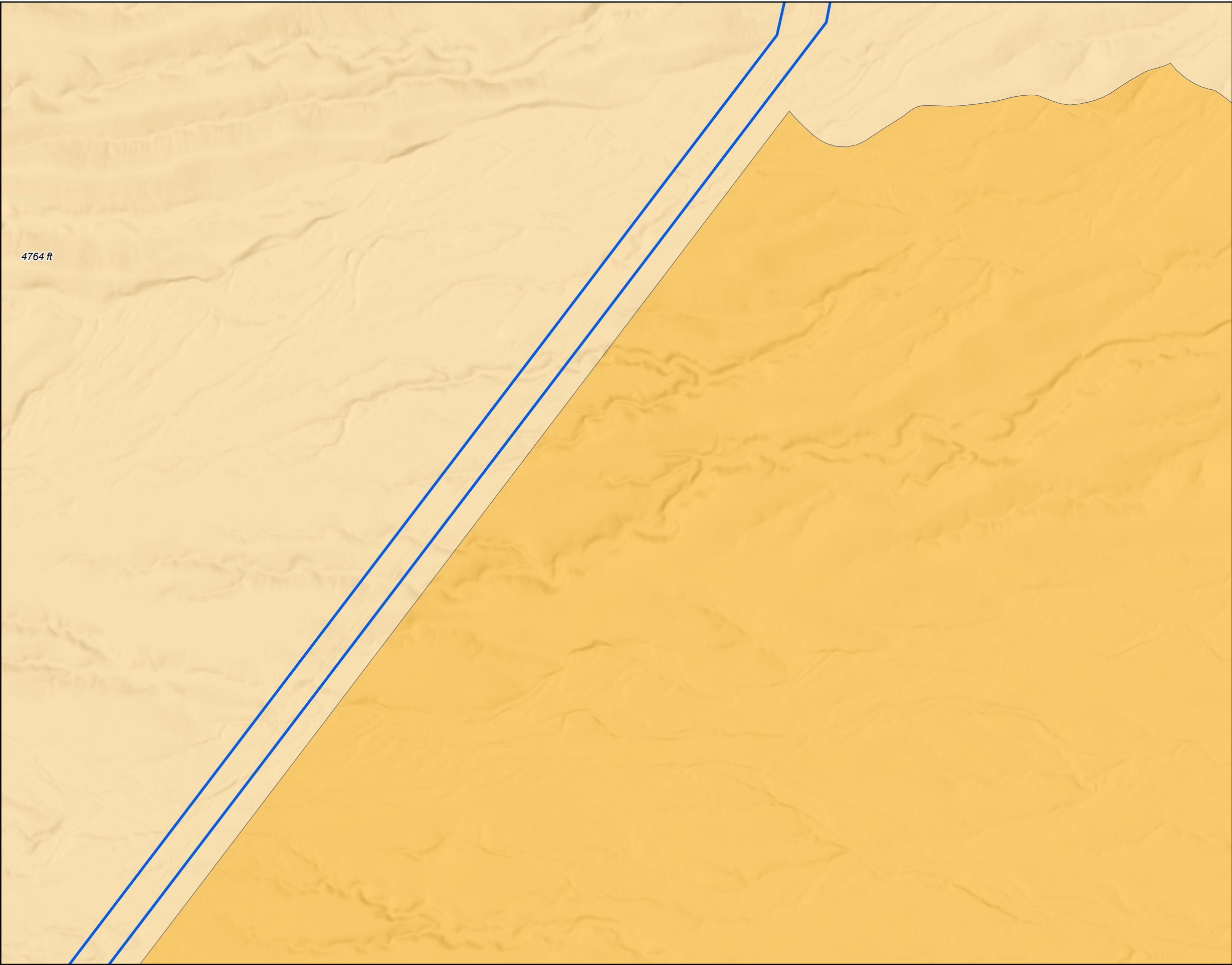


**ELDORADO-PISGAH-LUGO
220 kV PROJECT**






BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-15



Legend

-  EPL Project Alignment
-  BLM VRM Class I
-  BLM VRM Class II
-  BLM VRM Class III
-  BLM VRM Class IV



0 500 1,000 Feet

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

BLM VRM CLASSIFICATIONS



FIGURE
5.1-4a-16



Existing View from Ranchero Road near Via Quintana looking east (KOP 2)

Refer to Figure 4.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

EXISTING VIEW -- RANCHERO ROAD





**FIGURE:
5.1-5a**



Visual Simulation of Proposed Project (KOP 2)

Refer to Figure 4.1-1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220 kV PROJECT		
VISUAL SIMULATION -- RANCHERO ROAD		
 ARCADIS	 SOUTHERN CALIFORNIA EDISON <small>AN EDISON INTERNATIONAL COMPANY</small>	FIGURE: 5.1-5b



Existing View from Red Cedar Ave. near Squaw Bush Rd. looking east (KOP 6)

Refer to Figure 4.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

EXISTING VIEW -- RED CEDAR AVENUE




**FIGURE:
5.1-6a**



Visual Simulation of Proposed Project (KOP 6)

Refer to Figure 4.1-1 for photograph viewpoint locations

ELDORADO-PISGAH-LUGO 220 kV PROJECT		
VISUAL SIMULATION -- RED CEDAR AVENUE		
		FIGURE: 5.1-6b



Existing View from Johnson Valley OHV Area near Power Line Road looking east (KOP 7)

Refer to Figure 4.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

EXISTING VIEW -- JOHNSON VALLEY



**FIGURE:
5.1-7a**



Visual Simulation of Proposed Project (KOP 7)

Refer to Figure 4.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

VISUAL SIMULATION -- JOHNSON VALLEY



Existing View from Cima Road looking north (KOP 14)

Refer to Figure 4.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

EXISTING VIEW -- CIMA ROAD



**FIGURE:
5.1-8a**



Visual Simulation of Proposed Project (KOP 14)

Refer to Figure 4.1-1 for photograph viewpoint locations

**ELDORADO-PISGAH-LUGO
220 kV PROJECT**

VISUAL SIMULATION -- CIMA ROAD

5.2 Agriculture and Forestry Resources

This Section of the PEA describes the agriculture and forestry resources in the area of the EPL Project and the potential impacts that may result from construction and operation of the EPL Project.

5.2.1 Environmental Setting

5.2.1.1 *Agricultural Resources and GIS*

The EPL Project alignment is not located on lands identified as Unique Farmland. Approximately 0.1 miles of Segment 2 west of the Lucerne Valley, and 0.75 miles of Segment 2 in Lucerne Valley, cross lands identified as Prime Farmland and Farmland of Statewide Importance, respectively. The EPL Project alignment does not cross lands zoned as forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (California Department of Conservation 2017a and b; CALFIRE 2015). The EPL Project alignment is not located on lands under a Williamson Act contract. Agricultural land uses are not widespread along the EPL Project alignment.

The locations of Prime Farmland and Farmland of Statewide Importance are shown in Figure 5.2-1. Lands zoned for agricultural use are shown in Figure 5.11-1.

5.2.1.1.1 Unincorporated San Bernardino County

The EPL Project alignment in unincorporated San Bernardino County traverses lands identified as Prime Farmland and Farmland of Statewide Importance. No lands are under a Williamson Act contract.

Lands traversed by the EPL Project alignment within unincorporated San Bernardino County include those zoned AG, AV/AG, LV/AG, and LV/AG-40 (see Section 5.11 for definitions).

5.2.1.1.2 City of Hesperia

Within the City of Hesperia, the EPL Project alignment does not traverse any lands identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No lands are under a Williamson Act contract. No lands traversed by the EPL Project alignment are zoned for agriculture.

5.2.1.1.3 Unincorporated Clark County (NV)

The EPL Project alignment in unincorporated Clark County (NV) does not traverse any lands identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No lands are under a Williamson Act contract. No lands traversed by the EPL Project alignment are zoned for agriculture.

5.2.1.1.4 City of Boulder City (NV)

The EPL Project alignment in the City of Boulder City (NV) does not traverse any lands identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No lands are under a Williamson Act contract. No lands traversed by the EPL Project alignment are zoned for agriculture.

5.2.1.2 *Forestry Resources*

Section 12220(g) of the California Public Resources Code defines forest land as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

Public Resource Code Section 4526 states that “‘Timberland’ means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees.”

Timberland zoned Timberland Production is defined in Government Code Section 51104(g) as “an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h).”

The EPL Project alignment does not cross lands zoned as forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (California Department of Conservation 2017a and b; CALFIRE 2015).

5.2.1.2.1 Unincorporated San Bernardino County

No lands traversed by the EPL Project alignment in unincorporated San Bernardino County are identified as forest land, timberland, or timberland zoned Timberland Production.

5.2.1.2.2 City of Hesperia

No lands traversed by the EPL Project alignment in the City of Hesperia are identified as forest land, timberland, or timberland zoned Timberland Production.

5.2.1.2.3 Unincorporated Clark County (NV)

No lands traversed by the EPL Project alignment in unincorporated Clark County (NV) are identified as forest land, timberland, or timberland zoned Timberland Production.

5.2.1.2.4 City of Boulder City (NV)

No lands traversed by the EPL Project alignment in the City of Boulder City (NV) are identified as forest land, timberland, or timberland zoned Timberland Production.

5.2.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the EPL Project.

5.2.2.1 Agriculture and Forestry Regulations

5.2.2.1.1 Federal

5.2.2.1.1.1 Farmland Protection Policy Act

The National Agricultural Land Study of 1980-1981 found that millions of acres of farmland were being converted out of agricultural production in the United States each year. The 1981 Congressional report, “Compact Cities: Energy-Saving Strategies for the Eighties” (Compact Cities report), identified the need for Congress to implement programs and policies to protect farmland and combat urban sprawl and the waste of energy and resources that accompanies sprawling development.

The Compact Cities report indicated that much of the sprawl was the result of programs funded by the Federal Government. With this in mind, Congress passed the Agriculture and Food Act of 1981 (Public Law 97-98) containing the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. The final rules and regulations were published in the Federal Register on June 17, 1994. The FPPA

and its implementing rules and regulations set forth provisions intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses.

5.2.2.1.2 State

5.2.2.1.2.1 Williamson Act

The California Land Conservation Act of 1965 (Williamson Act) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market value. Local governments receive an annual subvention of forgone property tax revenues from the State via the Open Space Subvention Act of 1971.

California Government Code Section 51238 provides that, unless local organizations declare otherwise, the erection, construction, alteration, or maintenance of gas, electric, water, or communication facilities is compatible with Williamson Act contracts.

San Bernardino County voluntarily participates in the Williamson Act program.

5.2.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the EPL Project. Pursuant to GO 131-D, Section XIV.B, “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters.” Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities’ regulations are not applicable as the county and cities do not have jurisdiction over the EPL Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

5.2.2.1.3.1 San Bernardino County Countywide Plan: County Policy Plan

The County Policy Plan contains a number of goals, policies, and programs relevant to agricultural resources. Because EPL Project activities would not occur on any lands designated or zoned for agricultural use in San Bernardino County, these are not relevant.

5.2.2.1.3.2 San Bernardino County Code of Ordinances

Division 2: Land Use Zoning Districts and Allowed Land Uses establishes allowable uses for land use zoning designations. For all land use zoning designations, the Code notes that “transmission lines...are regulated and approved by the Public Utilities Commission. See alternate review procedures in §85.02.050, Alternate Review Procedures.”

Section 85.02.050, Alternate Review Procedures of the Code of Ordinances states in relevant part:

“Unless preempted by State or Federal Law, the specific land uses listed in the land use tables in Chapters 82.03 through 82.22 shall be allowed without a Conditional Use Permit when the following alternate review procedures have been completed to the satisfaction of the Director.

(a) Alternate Procedures.

(1) The land use has been approved at a public hearing by a State or Federally appointed body or commission empowered to approve or license the land use.

(2) Notice has been given to provide an opportunity for those interested or affected by the proposed use to take part in local public hearings conducted by the State or Federal body or commission approving the land use.

(3) The review process used by the approving agency has substantially addressed the same issues and concerns that would be addressed in applicable County review and approval process.

(4) The approving State or Federal body or commission has made a reasonable effort to respond to concerns expressed by the County of San Bernardino and its citizens.

(5) The approval of the land use would not have a substantially detrimental effect on the public health, safety, and welfare.

(6) Approval of the land use has complied with all applicable provisions of the California Environmental Quality Act (CEQA).

(7) The land use is consistent with the General Plan and any applicable specific plan.

(b) Acceptable Alternate Procedures. Projects approved by the following agencies shall qualify as the alternate review authority:

...

5) Projects approved by the State Public Utilities Commission.”

5.2.2.1.3.3 City of Hesperia General Plan

The City of Hesperia General Plan does not contain any agriculture or forestry resources-related goals or policies of relevance to the EPL Project.

5.2.2.1.3.4 City of Hesperia Municipal Code

The City of Hesperia Municipal Code does not contain any agriculture or forestry resources-related ordinances of relevance to the EPL Project.

5.2.2.1.3.5 Clark County (NV) Code of Ordinances

The Clark County (NV) Code of Ordinances does not contain any agriculture or forestry resources-related ordinances of relevance to the EPL Project.

5.2.2.1.3.6 City of Boulder City (NV) Code of Ordinances

The City of Boulder City (NV) Code of Ordinances does not contain any agriculture or forestry resources-related ordinances of relevance to the EPL Project.

5.2.3 Impact Questions

5.2.3.1 Agriculture and Forestry Impact Questions

The significant criteria for assessing the impacts to agriculture and forestry resources come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use

- Conflict with existing zoning for agricultural use, or a Williamson Act contract
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))
- Result in the loss of forest land or conversion of forest land to non-forest use
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use

5.2.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.2.4 Impact Analyses

5.2.4.1 Agriculture and Forestry Impacts

5.2.4.1.1 Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use?

5.2.4.1.1.1 Construction

No Impact. As described in Section 5.2.1.1, the EPL Project alignment crosses lands identified as Prime Farmland and Farmland of Statewide Importance. However, no work associated with the EPL Project would occur on lands identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. There are no lands identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance in the State of Nevada. Therefore, the EPL Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use, and there would be no impacts under this criterion.

5.2.4.1.1.2 Operations

No Impact. No structures to be installed under the EPL Project would be sited on lands identified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the EPL Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use, and no impacts would be realized under this criterion during operations and maintenance.

5.2.4.1.2 Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

5.2.4.1.2.1 Construction

No Impact. The EPL Project would not conflict with existing zoning for agricultural use or a Williamson Act contract.

No lands within San Bernardino County or the City of Hesperia are located on lands under a Williamson Act contract. The EPL Project traverses lands zoned for agricultural use in San Bernardino County.

The construction, operation, and maintenance of electric utility infrastructure is not listed as a prohibited use in the descriptions of the zoning classifications in the jurisdiction's zoning ordinance. Therefore, the project would not conflict with existing zoning for agricultural use.

Because the EPL Project is not located on lands under a Williamson Act contract and does not conflict with existing zoning for agricultural use, no impacts would occur under this criterion.

5.2.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the EPL Project alignment. No material changes in O&M activities are anticipated with implementation of the EPL Project, and therefore no impacts would be realized under this criterion during operations and maintenance.

5.2.4.1.3 Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

5.2.4.1.3.1 Construction

No Impact. No lands traversed by the EPL Project alignment are zoned as forest land, timberland, or Timberland Production. Therefore, there would be no impacts under this criterion.

5.2.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the EPL Project alignment. No material changes in O&M activities are anticipated with implementation of the EPL Project, and therefore no impacts would be realized under this criterion during operations and maintenance.

5.2.4.1.4 Would the project result in the loss of forest land or conversion of forest land to non-forest use?

5.2.4.1.4.1 Construction

No Impact. No lands traversed by the EPL Project alignment are identified as forest land. Therefore, there would be no impacts under this criterion.

5.2.4.1.4.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the EPL Project alignment. No material changes in O&M activities are anticipated with implementation of the EPL Project, and therefore no impacts would be realized under this criterion during operations and maintenance.

5.2.4.1.5 Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

5.2.4.1.5.1 Construction

No Impact. Construction of the EPL Project would not involve any other changes in the existing environment that could result in the conversion of farmland to non-agricultural use or forest land to non-forest use. Therefore, no impacts would occur under this criterion.

5.2.4.1.5.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the EPL Project alignment. No material changes in O&M activities are anticipated with

implementation of the EPL Project, and therefore no impacts would be realized under this criterion during operations and maintenance.

5.2.4.2 Prime Farmland Soil Impacts

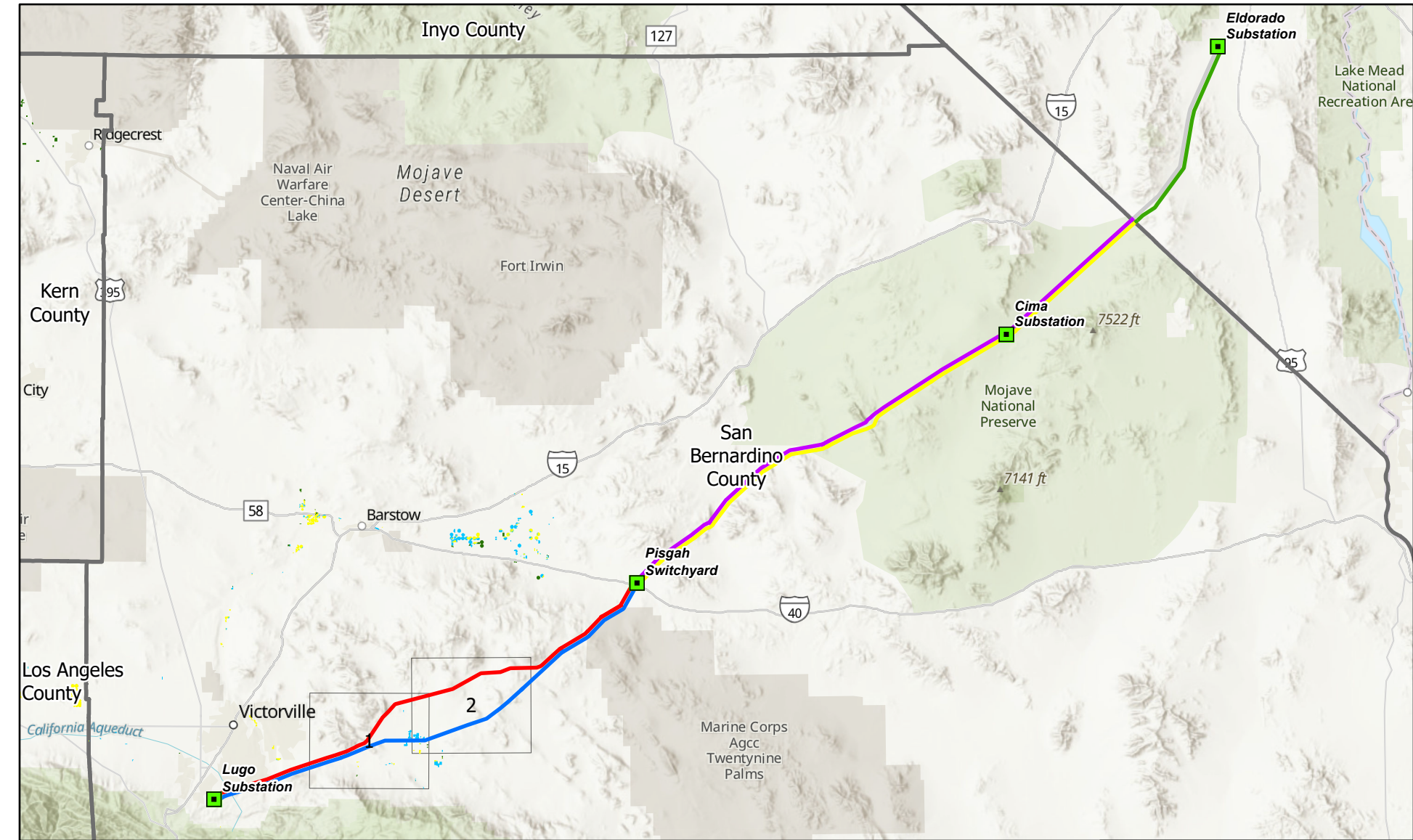
No work associated with the EPL Project would occur on lands identified as Prime Farmland, and therefore there would be no impacts to Prime Farmlands or associated soils.

5.2.4.3 Williamson Act Impacts

This is addressed in Section 5.2.4.1.2 above.

5.2.5 CPUC Draft Environmental Measures

There are no CPUC Draft Environmental Measures identified for Agricultural and Forestry Resources.



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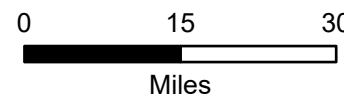
- | | | | |
|--|-------------|--|----------------------------------|
| | Substations | | Segment 6 |
| | Segment 1 | | County Boundary |
| | Segment 2 | | Prime Farmland |
| | Segment 3 | | Farmland of Statewide Importance |
| | Segment 4 | | Unique Farmland |
| | Segment 5 | | |

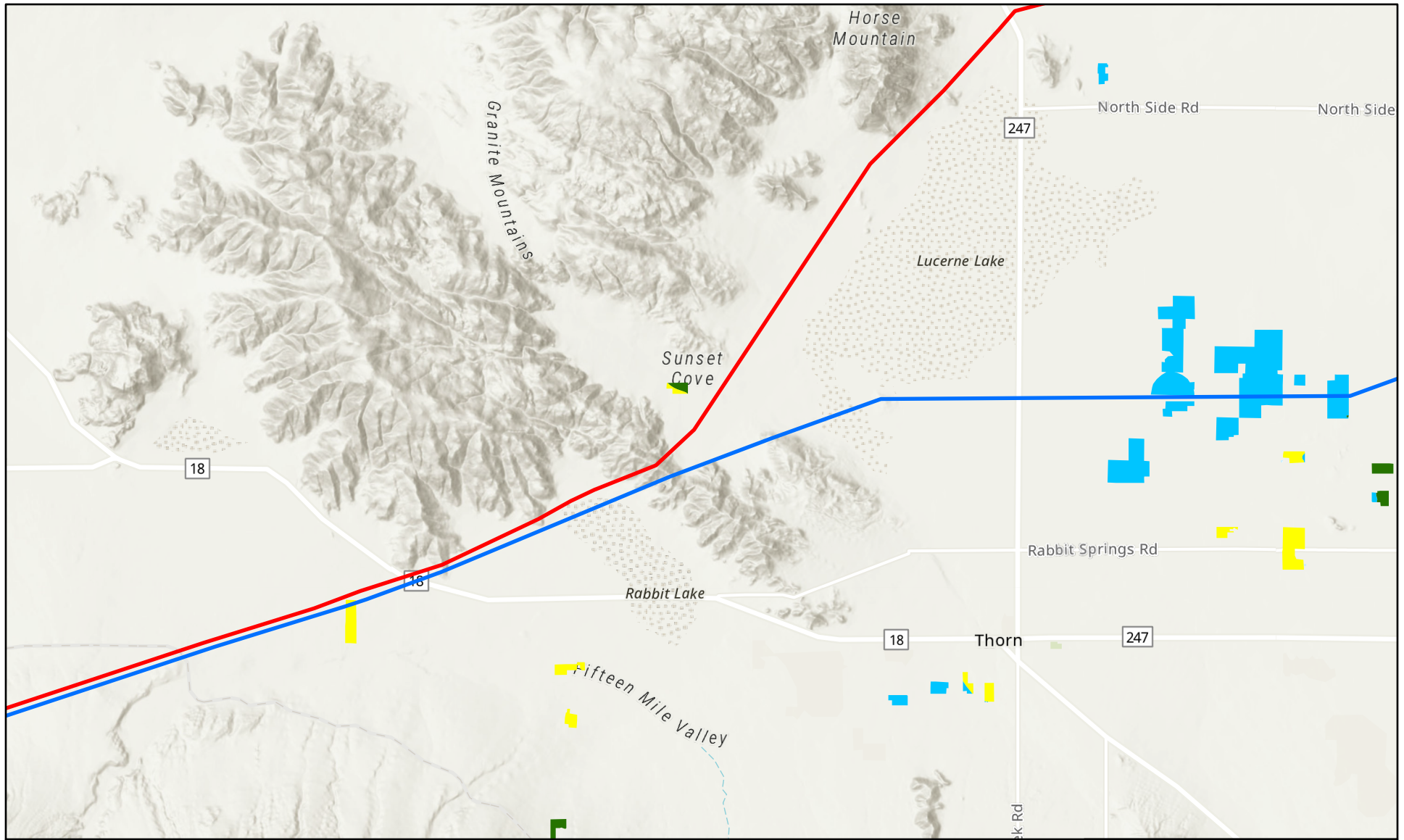
ELDORADO-PISGAH-LUGO 220 kV PROJECT

FARMLANDS



**FIGURE
5.2-1**





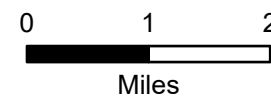
Legend

- Substations
- Segment 1
- Segment 2
- Prime Farmland
- Farmland of Statewide Importance
- Unique Farmland

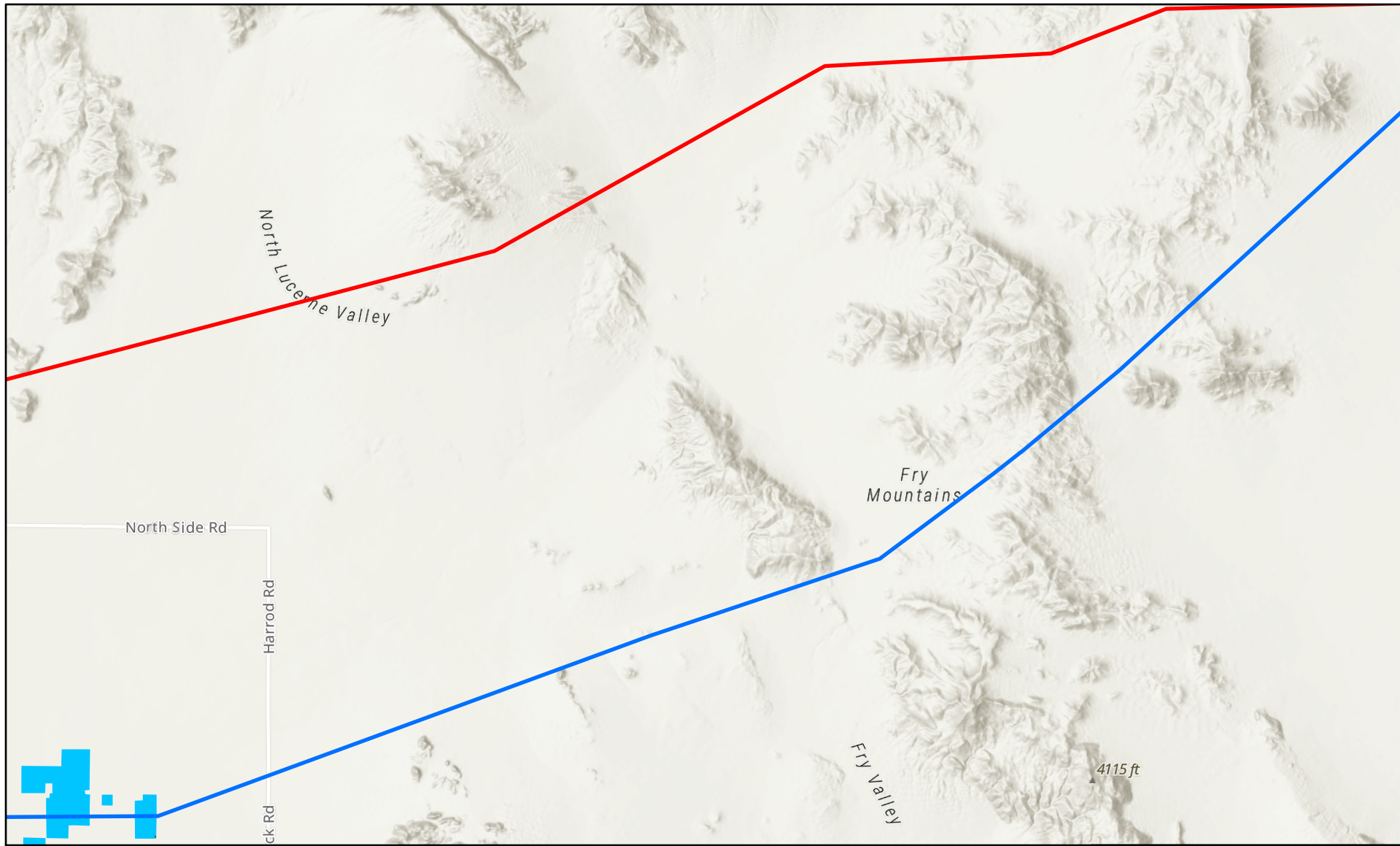
Page 1 of 2

ELDORADO-PISGAH-LUGO 220 kV PROJECT

FARMLANDS



**FIGURE
5.2-1**



5.3 Air Quality

This Section of the PEA describes the air quality resources in the area of the EPL Project and the potential impacts that may result from construction and operation of the project.

5.3.1 Environmental Setting

5.3.1.1 Air Quality Plans

The EPL Project alignment in California is located wholly within the Mojave Desert Air Basin (MDAB) which is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The District regulates air pollutant emissions for all stationary sources in its jurisdiction. In Nevada, the EPL Project alignment is located within the Las Vegas Intrastate Air Quality Control Region (AQCR) and is under the jurisdiction of the Clark County Division of Air Quality (DAQ).

It is the responsibility of an air district to ensure that State and Federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by the State of California (California Ambient Air Quality Standards – CAAQS) and by the Federal government (National Ambient Air Quality Standards – NAAQS) for the following criteria air pollutants: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter with a mean diameter of less than 10 microns (PM₁₀), particulate matter with a mean diameter of less than 2.5 microns (PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb). Further, California has additional standards for sulfates, hydrogen sulfide (H₂S), vinyl chloride, and visibility reducing particles (VRP). The State of Nevada utilizes the Federal NAAQS. Attainment of the State and Federal ambient air quality standards protect sensitive receptors and the public from criteria pollutants that are known to have adverse human health effects. The applicable air quality plans and rules are addressed in Section 5.3.2, Regulatory Setting.

5.3.1.2 Air Quality

The USEPA compares ambient air criteria pollutant measurements with NAAQS to assess the status of air quality of regions within the states. Similarly, the California Air Resources Board (CARB) compares air pollutant measurements in California to CAAQS. Based on these comparisons, regions within the states and California are designated as one of the following categories:

- **Attainment.** A region is designated as attainment if monitoring shows ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, areas that have been re-designated from nonattainment to attainment are classified as “maintenance areas” for a 10-year period to ensure that the air quality improvements are sustained.
- **Nonattainment.** If the NAAQS or CAAQS is exceeded for a pollutant, then the region is designated as nonattainment for that pollutant.
- **Unclassifiable.** An area is designated as unclassifiable if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

The attainment status of each CAAQS and NAAQS pollutant for MDAQMD and the NAAQS for Clark County is shown in Table 5.3-1 and the standards are shown in Table 5.3-2.

Table 5.3-1. State and Federal Attainment Status

Pollutant	California Status	National Status (CA portion)	National Status (NV portion)
O ₃	Nonattainment	Nonattainment	Unclassified/ Attainment
PM ₁₀	Nonattainment	Nonattainment	Nonattainment
PM _{2.5}	Nonattainment	Unclassified/ Attainment	Unclassified/ Attainment
CO	Attainment	Unclassified/ Attainment	Nonattainment
NO ₂	Attainment	Unclassified/ Attainment	Unclassified/ Attainment
SO ₂	Attainment	Unclassified/ Attainment	Unclassified/ Attainment
Pb	Attainment	Unclassified/ Attainment	Unclassified/ Attainment
VRP	Unclassified	No Federal Standard	No Federal Standard
Sulfates	Attainment	No Federal Standard	No Federal Standard
H ₂ S	Unclassified	No Federal Standard	No Federal Standard

Source: MDAQMD (2017), DAQ (2018)

Presently, the ambient air in vicinity of the EPL Project is classified by the CARB as nonattainment for O₃, PM₁₀ and PM_{2.5}. Under the NAAQS, the MDAQMD is also designed as a nonattainment area for O₃ and PM₁₀. Portions of Clark County are designed as nonattainment areas under the NAAQS for PM₁₀ and CO.

Table 5.3-2. State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
Ozone (O ₃)	1 Hour	0.09 ppm / (180 µg/m ³)	—
	8 Hours	0.070 ppm / (137 µg/m ³)	0.070 ppm / (137 µg/m ³)
Respirable Particulate Matter (PM ₁₀)	24 Hours	50 µg/m ³	150 µg/m ³
	AAM	20 µg/m ³	—
Fine Particulate Matter (PM _{2.5})	24 Hours	—	35 µg/m ³
	AAM	12 µg/m ³	12.0 µg/m ³
Carbon Monoxide (CO)	8 Hours	9.0 ppm / (10 mg/m ³)	9 ppm / (10 mg/m ³)
	1 Hour	20 ppm / (23 mg/m ³)	35 ppm / (40 mg/m ³)
Nitrogen Dioxide (NO ₂)	AAM	0.030 ppm / (57 µg/m ³)	0.053 ppm / (100 µg/m ³)
	1 Hour	0.18 ppm / (339 µg/m ³)	0.100 ppm / (188 µg/m ³)
Sulfur Dioxide (SO ₂)	24 Hours	0.04 ppm / (105 µg/m ³)	0.14 ppm / (365 µg/m ³)
	1 Hour	0.25 ppm / (655 µg/m ³)	0.075 ppm / (196 µg/m ³)
Lead	3-Month Average	—	0.15 µg/m ³
	30 Day Average	1.5 µg/m ³	—
Sulfates	24 Hours	25 µg/m ³	—
Visibility Reducing Particles	8 Hours	See note ¹	—
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	—
Vinyl Chloride	24 Hours	0.01 ppm (26 µg/m ³)	—

Notes:

1 State criterion for nonattainment of visibility-reducing particles is the amount of particles present to produce an extinction coefficient of 0.23 per kilometer when relative humidity is less than 70 percent.

µg/m³ = microgram per cubic meter

mg/m³ = milligram per cubic meter

ppb = parts per billion

ppm = parts per million

Source: MDAQMD (2017)

CARB operates an extensive network of air monitoring stations within California. The monitoring station network provides air quality monitoring data, including real-time meteorological data and ambient pollutant levels, as well as historical data. Table 5.3-3 presents the average ambient pollutant concentrations and the exceedances of state and federal standards that have occurred at the monitoring stations in the Mojave Desert Air Basin from 2018 through 2020, the most recent years for which data are available.

Table 5.3-3. Ambient Air Quality

Pollutant	Air Basin	2018	2019	2020	2018	2019	2020
		# Days > State 1-Hour Std			Max 1-Hour Observation		
Ozone	Mojave Desert	25	12	19	0.126	0.119	0.130
		# Days > State 8-Hour Std			Max State 8-Hour Average		
Ozone	Mojave Desert	88	52	63	0.107	0.090	0.101
		# Days > National 24-Hour Std			Max State 24-Hour Average		
PM _{2.5}	Mojave Desert	2.1	0	15	40.4	34.1	125.4
		# Days > State 24-Hour Std			Max State 24-Hour Average		
PM ₁₀	Mojave Desert	*	15	28.8	103.2	240.8	360.9

* Insufficient data available to determine value

Source: CARB 2022

5.3.1.3 Sensitive Receptor Locations

California Health and Safety Code § 42705.5(a)(5) states that “[s]ensitive receptor locations may include hospitals, schools, and day care centers, and such other locations as the air district board or California Air Resources Board may determine.” The MDAQMD defines sensitive receptor land uses as “[r]esidences, schools, daycare centers, playgrounds and medical facilities”.

Sensitive receptors in the vicinity of the EPL Project are shown in Figure 5.13-1; Section 5.13, Noise provides more detailed descriptions of the locations of residential areas and other sensitive receptors in the vicinity of the EPL Project.

5.3.2 Regulatory Setting

Federal, State, and local regulations were reviewed for applicability to the EPL Project.

5.3.2.1 Regulatory Setting

5.3.2.1.1 Federal

The 1970 Federal Clean Air Act (CAA) established ambient air quality standards (AAQS) for six major pollutants—O₃, particle pollution (PM₁₀, PM_{2.5}), CO, NO₂, SO₂, and lead. These six air pollutants are known to have adverse impacts on human health and the environment. The USEPA has set primary and secondary maximum ambient thresholds for criteria pollutants. The primary thresholds were set to protect human health - particularly for children and the elderly, as well as for individuals who suffer from chronic lung conditions (e.g., asthma and emphysema). The secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings. The NAAQS is comprised of the combined primary and secondary standards set by the U.S. EPA. The 1977 CAA Amendments required each state to develop and maintain a State Implementation Plan (SIP) for each criteria pollutant that exceeds the NAAQS for that pollutant. The SIP serves as a tool to reduce pollutants that are

known to cause impacts if they exceed ambient thresholds and to achieve compliance with the NAAQS. In 1990, the CAA was amended to strengthen regulation of both stationary and mobile emission sources for the criteria pollutants. In July 1997, the USEPA developed new health-based NAAQS for O₃ and PM₁₀. However, these standards were not fully implemented until 2001, after the resolution of several lawsuits. The new federal O₃ standard of 0.080 parts per million (ppm), established in 1997, was based on a longer averaging period (8 hours versus 1 hour), recognizing that prolonged exposure to O₃ is more damaging. In March 2008, the USEPA further lowered the 8-hour O₃ standard from 0.080 ppm to 0.075 ppm, and in 2015 the standard was lowered to 0.07 ppm. The new federal PM standard is based on finer particles (2.5 microns and smaller versus 10 microns and smaller), recognizing that finer particles may have a higher residence time in the lungs and contribute to greater respiratory illness. In February 2007, the NAAQS for NO₂ was amended to lower the existing 1-hour standard of 0.25 ppm to 0.18 ppm, which is not to be exceeded; and established a new annual standard of 0.030 ppm, which is also not to be exceeded. Table 5.3-2 contains a list of the NAAQS.

5.3.2.1.2 State

5.3.2.1.2.1 California

The California Clean Air Act (CCAA) requires air districts to develop and implement strategies to attain CAAQS. For some pollutants, the California standards are more stringent than the national standards. Regional air quality management districts are mandated to prepare an air quality plan specifying how federal and state standards would be met. The CAAQS are listed in Table 5.3-2. The CARB enforces the CAAQS and works with the state's Office of Environmental Health Hazard Assessment in identifying toxic air contaminants (TACs) and enforcing rules related to TACs, including the Air Toxic Hot Spots Information and Assessment Act of 1987 (California Health and Safety Code Section 44300, et seq.). Enacted to identify TAC hot spots where emissions from specific sources may expose individuals to an elevated risk of adverse health effects, this act requires that businesses or other establishments identified as significant sources of toxic emissions provide the affected population with information about health risks posed by the emissions.

CARB also regulates mobile emission sources in California (e.g., construction equipment, trucks, and automobiles) and oversees the air districts. Relevant programs related to the oversight of mobile source emissions include the Off-Road and On-Road Mobile Sources Emission Reduction Programs, the Portable Equipment Registration Program (PERP), and the Airborne Toxic Control Measure for Diesel Particulate Matter (DPM) from Portable Engines. The Mobile Sources Emission Reduction programs are aimed at reductions of PM₁₀, CO, NO_x, and VOCs. CARB has also adopted specific control measures for the reduction of DPM from off-road, in use diesel vehicles (rated 25 horsepower and higher), such as backhoes, bulldozers, and earthmovers used in construction projects. Additional DPM control measures are also in place for heavy-duty, on-road diesel trucks operated by public utilities and municipalities. The PERP and Airborne Toxic Control Measure for DPM from Portable Engines provide for statewide registration and control of DPM from portable engines rated 50 horsepower and higher.

5.3.2.1.2.2 Nevada

Nevada Revised Statutes Section 704.865 provides that "A person, other than a local government, shall not commence to construct a utility facility in the State without first having obtained a permit therefor from the Commission. The replacement of an existing facility with a like facility, as determined by the Commission, does not constitute construction of a utility facility." The Public Utilities Commission of Nevada is the lead agency for compliance with the Nevada Utility Environmental Protection Act.

5.3.2.1.3 Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the EPL Project. Pursuant to GO 131-D, Section XIV.B, “Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC’s jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters.” Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the county and cities’ regulations are not applicable as the county and cities do not have jurisdiction over the EPL Project. Accordingly, the following discussion of local land use regulations is provided for informational purposes only.

The applicable air districts are responsible for regulating emissions from stationary sources in their air districts. The air districts are also responsible for developing, updating, and implementing the Air Quality Management Plans (AQMPs) for their air basins. An AQMP is prepared and implemented by an air pollution district for a county or region designated as being in “nonattainment” of the national and/or California ambient air quality standards.

The following rules were established by MDAQMD to regulate air quality and are applicable to the project.

5.3.2.1.3.1 Mojave Desert Air Quality Management District

The MDAQMD implements air quality programs required by state and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their roles in protecting air quality. The MDAQMD is responsible for managing and permitting existing, new, and modified sources of air emissions within its boundaries, and has established rules and regulations that would apply to the proposed project to ensure compliance with local, state, and federal air quality regulations. In addition, the MDAQMD provides methodologies for analyzing a project’s impacts under CEQA. The following plans, rules, and regulations apply to all sources within the MDAQMD’s jurisdiction.

Rule 401—Visible Emissions. A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

- (a) As dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
- (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (a) of this rule

Rule 402—Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403—Fugitive Dust. This Rule includes the following restrictions:

- (a) A person shall not cause or allow the emissions of fugitive dust from any transport, handling, construction, or storage activity so that the presence of such dust remains visible in the atmosphere

beyond the property line of the emission source, except during high winds.²⁰

(b) A person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land, and solid waste disposal operations.

(c) A person shall not cause or allow particulate matter to exceed 100 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on high volume samplers at the property line for a minimum of five hours, except during high winds.

(d) A person shall take every reasonable precaution to prevent visible particulate matter from being deposited upon public roadways as a direct result of their operations. Reasonable precautions shall include, but are not limited to, the removal of particulate matter from equipment prior to movement on paved streets or the prompt removal of any material from paved streets onto which such material has been deposited.

(e) For construction/demolition activities, owner/operations shall:

1. Obtain and maintain a District-approved Dust Control Plan.
2. Use periodic watering for short-term stabilization of disturbed surfaces to minimize visible fugitive dust emissions.
3. Take actions sufficient to prevent project-related trackout onto paved surfaces.
4. Cover loaded haul vehicles while operating on publicly maintained paved surfaces.
5. Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions.
6. Cleanup project-related trackout or spills on publicly maintained paved surfaces within twenty-four hours.
7. Reduce non-essential earth-moving activity under high wind conditions.
8. Maintain the natural topography to the extent possible during grading and other earth movement.
9. Provide a construction schedule that specifies construction of parking lots and paved roads first, where feasible, and upwind structures prior to downwind structures.
10. Cover or maintain bulk material carried on the haul truck operating on paved roads
11. Remove bulk material tracked onto paved road surfaces.

5.3.2.1.3.2 *Clark County Current Rules & Regulations*

The DAQ implements and enforces the air pollution control program in Clark County. The DAQ applies and enforces Current Rules & Regulations, which establish requirements for sources that emit or release air contaminants into the atmosphere. The DAQ has also developed guidelines for source testing to provide uniform guidance for sources and testing companies in the preparation, execution, and reporting of air quality performance tests in Clark County. The DAQ administers a variety of programs to improve the health and welfare of its residents by ensuring that the air quality in Clark County meets healthy, regulatory standards.

²⁰ High winds are when wind speed instantaneously exceeds 40 kilometers (25 miles) per hour, or when the average wind speed is greater than 24 kilometers (15 miles) per hour. The average wind speed determination shall be on a 15 minute average at the nearest official air-monitoring station or by wind instrument located at the site being checked.

Section 41 – Fugitive Dust. Section 41 prohibits construction activities from generating visible dust beyond the property line. To minimize fugitive dust emissions, the rule requires construction activities to take reasonable precautions, which may include sprinkling, compacting, enclosure, chemical or asphalt sealing, cleaning up, and sweeping.

Section 90 – Fugitive Dust from Open Areas and Vacant Lots. Section 90 limits PM emissions into the ambient air from open areas and vacant lots. To limit PM emissions into the ambient air from open areas and vacant lots, the rule requires construction activities to use the best available control measures, which may include the following:

- Installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective traffic control measures
- Applying and maintaining surface gravel or dust palliatives to all disturbed areas by motor vehicles in compliance with one of the stabilization standards described in Subsection 90.2.1.2
- Applying and maintaining an alternative control measure approved in writing by the Control Officer and Region IX Administrator of the U.S. EPA

Section 94 – Permitting and Dust Control For Construction Activities. Section 94 limits PM emission in ambient air by preventing, controlling, and mitigating fugitive dust from construction activities; and establishing fugitive dust control standards for Clark County, defining precautions for the prevention and control of fugitive dust from all construction activities, and establishing thresholds for enforcement of these standards. Prior to engaging in any construction activities, the property owner and/or operator must apply for and obtain a dust control permit from the Clark County DAQ. To limit PM emissions in ambient air by preventing, controlling, and mitigating fugitive dust from construction activities, the rule requires construction activities to use the best available control measures, which may include the following:

- Maintaining soil stability 24 hours a day, seven days a week, until the permit is closed in accordance with Subsection 94.6.3(c)
- Operating water trucks and water pulls in the event there are wind conditions that cause fugitive dust emissions, unless wind conditions are such that the continued operation of watering equipment cannot reduce fugitive dust emissions, or that continued equipment operation poses a safety hazard

These actions are required for all projects within Clark County that are capable of generating fugitive dust.

5.3.2.2 Air Permits

SCE has not identified the need to apply for or receive any air quality-related discretionary permits from the MDAQMD or the DAQ; SCE will comply with applicable rules and will develop and implement required plans.

5.3.3 Impact Questions

5.3.3.1 Impact Questions

The significant criteria for assessing the impacts to air quality come from the CEQA Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan
- Result in a cumulatively considerable net increase of any criteria pollutant for which the EPL Project region is nonattainment under an applicable federal or state ambient air quality standard

- Expose sensitive receptors to substantial pollutant concentrations
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people

5.3.3.1.1 Thresholds for Construction and Operational Emissions

Section 15002 of the CEQA Guidelines defines a significant effect on the environment as “a substantial adverse change in the physical condition which exists in the area affected by the proposed project.” The impact of a project to air quality is determined by examining the types and levels of emissions generated by the EPL Project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of identified air pollution thresholds.

5.3.3.1.1.1 Mojave Desert Air Quality Management District

The MDAQMD California Environmental Quality Act (CEQA) And Federal Conformity Guidelines (MDAQMD 2020) notes, in relevant part:

Any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The District will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient:

- Generates total emissions (direct and indirect) in excess of the thresholds given in Table 6 (Table 5.3-4 in this document);
- Generates a violation of any ambient air quality standard when added to the local background;
- Does not conform with the applicable attainment or maintenance plan(s)

A significant project must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation. Note that the emission thresholds are given as a daily value and an annual value, so that multi-phased project (such as project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value. As construction will occur for 24 months, construction emissions will be compared to the annual thresholds. Operational emissions will also be compared to the annual thresholds.

The Clark County DAQ Air Quality Regulations do not include specific construction thresholds that apply to the EPL Project. As a result, the U.S. EPA’s General Conformity Rule has been applied to portions of the EPL Project that would occur in Nevada. General Conformity ensures that actions taken by federal agencies do not interfere with a state’s plans to attain and maintain national air quality standards. Clark County’s current NAAQS attainment statuses were compared to the U.S. EPA’s de minimis tables to develop Proposed Project thresholds. Table 5.3-4: Thresholds of Significance lists the resulting thresholds of significance that have been applied to the portion of the Proposed Project within Clark County.

Table 5.3-4. Significant Emissions Thresholds

Criteria Pollutant	MDAQMD Threshold (tons per year)	DAQ threshold (tons per year)
Greenhouse Gases (CO ₂ e)	100,000	None
Carbon Monoxide (CO)	100	100
Oxides of Nitrogen (NO _x)	25	100
Volatile Organic Compounds (VOC)	25	100
Oxides of Sulfur (SO _x)	25	100

Table 5.3-4. Significant Emissions Thresholds

Criteria Pollutant	MDAQMD Threshold (tons per year)	DAQ threshold (tons per year)
Particulate Matter (PM ₁₀)	15	100
Particulate Matter (PM _{2.5})	12	100
Hydrogen Sulfide (H ₂ S)	10	None
Lead (Pb)	0.6	None

5.3.3.2 Additional CEQA Impact Questions

There are no CPUC-identified additional CEQA impact questions.

5.3.4 Impact Analysis

5.3.4.1 Impact Analysis

5.3.4.1.1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

5.3.4.1.1.1 Construction

No Impact. The MDAQMD is the agency responsible for managing local air quality and administering California and federal air pollution control programs ensuring attainment and maintenance of the ambient air quality standards. To this end, the District has established an air quality management plan (AQMP). Generally, a project may be inconsistent with an AQMP or applicable attainment plan if it could cause population and/or employment growth or growth in vehicle-miles traveled in excess of the growth forecasts included in an applicable AQMP or attainment plan. Because construction of the EPL Project would not result in population growth, the EPL Project would not conflict with the growth projections used in the development of the applicable AQMPs. Please see Section 5.14, Population and Housing, for a discussion of economic and population growth.

Furthermore, the emissions associated with EPL Project construction would be temporary and would represent a small fraction of the regional emission inventories included in the applicable AQMPs. Construction of the project would be performed in compliance with applicable air district rules and regulations; this would ensure that activities are consistent with air district efforts to achieve attainment and maintenance of the standards. The EPL Project-related emissions occurring in compliance with these rules and regulations would not conflict with or obstruct implementation of the applicable air quality plan.

Because the EPL Project's construction emissions are not expected to substantially contribute to regional emissions and would not conflict with the growth projections in the applicable AQMPs, and because construction of the project would be performed in compliance with applicable air district rules and regulations, the EPL Project would not conflict with or obstruct implementation of the applicable AQMPs, and there would be no impact.

5.3.4.1.1.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the EPL Project alignment. No material changes in O&M activities are anticipated with implementation of the EPL Project, and therefore no impacts would be realized under this criterion during operations and maintenance.

5.3.4.1.2 Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the EPL Project region is nonattainment under an applicable federal or state ambient air quality standard?

5.3.4.1.2.1 Construction

Less than Significant Impact. Emissions during the construction phase would include criteria air pollutants that could contribute to existing or projected violations of the ambient air quality standards for ozone, PM₁₀, and PM_{2.5}. Work as described in Chapter 3 along the EPL Project alignment would result in air pollutant emissions from construction equipment and material handling at the various work areas and from off-site motor vehicle trips carrying workers and materials, and helicopter use. Motor vehicles, helicopters, off-road equipment, and other construction equipment would directly emit criteria air pollutants and toxic air contaminants. The equipment and workforce are itemized and detailed in Table 3.6-1. Table 5.3-5 summarizes the estimated total annual construction emissions. Annual emissions in each air district with annual construction significance thresholds were estimated using the total project annual emissions and the fraction of the line mileage in the air district as shown in Table 5.3-6.

Table 5.3-5. Estimated Annual Construction Emissions

Construction Year	VOC	NO _x	SO ₂	PM ₁₀	PM _{2.5}	CO
2025 (tpy)	0.028	0.24	0.00087	0.92	0.10	0.23
2026 (tpy)	1.6	3.8	0.024	6.9	0.90	4.5
2027 (tpy)	0.12	1.1	0.0033	2.9	0.33	1.0

Abbreviations:

tpy = tons per year

Note: Emissions includes measures under MDAQMD and DAQ fugitive dust rules

Table 5.3-6. Estimated District Annual Construction Emissions

	VOC	NO _x	SO ₂	PM ₁₀	PM _{2.5}	CO
MDAQMD						
Annual Emissions (tpy)	1.4	3.3	0.20	6.0	0.78	3.9
Significance Threshold (tpy)	25	25	25	15	12	100
Exceedance?	No	No	No	No	No	No
DAQ						
Annual Emissions (tpy)	0.21	0.51	0.0031	0.92	0.12	0.60
Significance Threshold (tpy)	100	100	100	100	100	100
Exceedance?	No	No	No	No	No	No

Abbreviations:

tpy = tons per year

Note: Emissions includes measures under MDAQMD and DAQ fugitive dust rules

Construction-related emissions (including pre-construction activities such as staging yard development) would be spread over a development schedule of 30 months (March 2025 – September 2027). Based on the construction activity forecast, none of the evaluated pollutants would be emitted at levels above the threshold for the construction duration of the EPL Project.

As shown in Table 5.3-6, with compliance with district fugitive dust rules, construction emissions would not exceed the significance threshold for any criteria pollutant. Therefore, construction of the EPL Project could not result in a cumulatively considerable net increase of any criteria pollutant. As a result, impacts would be less than significant.

5.3.4.1.2.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the EPL Project alignment. No material changes in O&M activities are anticipated with implementation of the EPL Project, and therefore no impacts would be realized under this criterion during operations and maintenance.

5.3.4.1.3 Would the project expose sensitive receptors to substantial pollutant concentrations?

5.3.4.1.3.1 Construction

Less than Significant Impact. Sensitive receptors in the vicinity of the EPL Project alignment could be exposed to increases in pollutants as a result of: the fugitive dust released during excavation activities; vehicle travel on unpaved roads; and the use of internal combustion engines on construction equipment. Pollutant emissions would be distributed over the construction period and across the EPL Project alignment, and thus would not be concentrated in any one area. Further, activities at any given construction work area would last a matter of days, and where multiple activities are scheduled for a given construction work area, activities would generally not overlap or be performed consecutively. As a result, the actual emissions that would be created at a single site, and thus at a single sensitive receptor, would be dramatically lower than the overall project emissions. Therefore, because of the temporary and transient temporal and geographic nature of emissions, impacts would be less than significant.

5.3.4.1.3.2 Operations

No Impact. As presented in Chapter 3, SCE is currently performing O&M activities, including inspections, along the EPL Project alignment. No material changes in O&M activities are anticipated with implementation of the EPL Project, and therefore no impacts would be realized under this criterion during operations and maintenance.

5.3.4.1.4 Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

5.3.4.1.4.1 Construction

Less than Significant Impact. Potential odor sources associated with construction of the EPL Project include equipment exhaust. These emissions would be short-term, distributed throughout the alignment, intermittent in nature, would disperse quickly, and would cease upon completion of construction. Because odors would be temporary and would disperse rapidly with distance from the source, and because the majority of construction activities would occur in unoccupied, open space areas, construction-generated odors would not result in the frequent or long-term exposure of a substantial number of people to objectionable odorous emissions. Therefore, impacts would be less than significant.

5.3.4.1.4.2 Operations

Less than Significant Impact. Potential odor sources associated with O&M activities include equipment exhaust. These emissions would be short-term, limited to the location of the O&M activity and intermittent in nature, would disperse quickly, and would cease upon completion of the O&M activity at a given location. Because odors would be temporary and would disperse rapidly with distance from the source, and

because the majority of O&M activities would occur in unoccupied, open space areas, O&M-generated odors would not result in the frequent or long-term exposure of a substantial number of people to objectionable odorous emissions. Therefore, impacts would be less than significant.

5.3.4.2 Air Quality Emissions Modeling

Emissions from ground construction activities were estimated using CalEEMod v2020.4.0. The Model uses widely accepted models for emission estimates and default data from sources such as USEPA AP-42 emission factors, CARB vehicle emission models, and California Energy Commission and other agency studies (California Air Pollution Control Officers Association [CAPCOA] 2013). Helicopter emissions were estimated based on the Swiss Federal Office of Civil Aviation (FOCA) Guidance on the Determination of Helicopter Emissions (FOCA 2015). Emissions modeling results are presented in Appendix B; model input and output data sheets in Microsoft Excel format are provided to the CPUC under separate cover.

5.3.4.3 Air Quality Emissions Summary

A table summarizing the air quality emissions for the project and applicable thresholds for each applicable attainment area is presented in Section 5.3.4.1 above. Because no exceedances are modeled, there is no modeling or summary of controlled emissions. Although no exceedances are modeled, as a standard practice described in Section 3.6.4, all construction equipment with rating between 100 and 750 horsepower (hp) will be required to use engines compliant with U.S. EPA Tier 4 non-road engine standards where and when such equipment is available.

5.3.4.4 Health Risk Assessment

Review of Office of Environmental Health Hazard Assessment guidance (Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, February 2015) indicates a Health Risk Assessment is not required for the EPL Project because no new stationary source of air pollutants is included in the EPL Project.

5.3.5 CPUC Draft Environmental Measures

As applicable, SCE will implement, at the direction of the CPUC, the following CPUC-identified Draft Environmental Measure during construction of the EPL Project:

Dust Control During Construction

The Applicant shall implement measures to control fugitive dust in compliance with all local air district(s) standards. Dust control measures shall include the following at a minimum:

- All exposed surfaces with the potential of dust-generating shall be watered or covered with coarse rock to reduce the potential for airborne dust from leaving the site.
- The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- Cover all haul trucks entering/leaving the site and trim their loads as necessary.
- Use wet power vacuum street sweepers to sweep all paved access road, parking areas, staging areas, and public roads adjacent to project sites on a daily basis (at minimum) during construction. The use of dry power sweeping is prohibited.

- All trucks and equipment, including their tires, shall be washed off prior to leaving project sites.
- Apply gravel or non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at project sites.
- Water and/or cover soil stockpiles daily.
- Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- All vehicle speeds shall be limited to fifteen (15) miles per hour or less on unpaved areas.
- Implement dust monitoring in compliance with the standards of the local air district.
- Halt construction during any periods when wind speeds are in excess of 50 mph.