4.0 Environmental Analysis

4.1 Aesthetics

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to aesthetics. The work associated with the Getty, Goleta, Ortega, Ventura, and Santa Barbara Substations would occur within existing structures and would have no impact on aesthetics; therefore, these components of the proposed project are not discussed further in this section. Recreation features and potential impacts to recreation resources and other land uses are discussed in Section 4.10, "Land Use," and Section 4.14, "Recreation."

4.1.1 Environmental Setting

4.1.1.1 Regional and Local Aesthetic Resources

The proposed project is located primarily on private land in the rugged coastal foothills north and east of the City of Carpinteria in eastern Santa Barbara County and north and west of the City of Ventura in western Ventura County. The Los Padres National Forest (LPNF) occupies approximately 1.8 million acres just inland and north of the project area, and the picturesque coastline bounds the project area to the south. Several high ridges and peaks (e.g., Laguna Ridge, Rincon Mountain, and Red Mountain) occur in the area. The rugged terrain and foothills provide a "wild-appearing highly scenic backdrop" for views from coastal areas (USFS 2005a).

The project area includes elevations of about 30 to 1,500 feet above mean sea level. Segment 3A crosses a generally flat and low elevation of the coastal plain. This segment consists largely of low-density residential development, agricultural operations, greenhouses, nurseries, orchards, and irrigated row crops and flowers. The visual character of Segment 3A varies and is primarily suburban residential, agricultural, and natural. The remaining project segments (1, 2, 3B, and 4) extend through rugged and rolling terrain punctuated by steep arroyos and small streams and drainages. These segments cross grazing lands, riparian areas, orchards, and low-density residential development. The visual character of Segments 1, 2, 3B, and 4 is largely agricultural, rural, and natural. Three structures along Segment 4 are located within LPNF land.

4.1.1.2 Visual Character and Quality

The visual character and quality of the region and the proposed project area are described using criteria established by the Federal Highway Administration (FHWA; see Section 4.1.3.1) for visual landscape relationships. The criteria for describing visual quality include vividness, intactness, and unity, as defined below:

- Vividness is the visual power or memorability of landscape components as they combine in striking or distinctive visual patterns.
- Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements; this factor can be present in well-kept urban and rural landscapes, as well as in natural settings.

- Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape. (FHWA 1981).

The appearance of the landscape is described below using these criteria and descriptions of the dominance elements of form, line, color, and texture. These dominance elements are the basic components used to describe visual character and quality for most visual assessments (USFS 1996 FHWA 1981).

4.1.1.3 Viewer Sensitivity

Viewer sensitivity or concern is based on the visibility of resources in the landscape, the proximity of viewers to visual resources, the elevational position of viewers relative to visual resources, the frequency and duration of views, the number of viewers, and the type of expectations of individuals and viewer groups.

The criteria for identifying importance of views are related in part to the viewer's position relative to the resource. An area of the landscape that is visible from a particular location (e.g., a park or overlook) or series of points (e.g., a road or trail) is defined as a viewshed. To identify the importance of views of resources, a viewshed may be broken into distance zones of foreground, middleground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater its importance to the viewer. Although distance zones in viewsheds may vary between different geographic regions or types of terrain, a commonly used set of criteria identifies the foreground distance zone as one quarter to one half of one mile from the viewer, the middleground distance zone as extending from the foreground zone to 3 to 5 miles from the viewer, and the background zone as extending from the middleground zone to infinity (USFS 1996). Also, resources that are higher in elevation than the viewer tend generally to take on greater visual importance than resources located at a lower elevation than the viewer.

Viewer sensitivity also depends on the number and types of viewers and the frequency and duration of views. Generally, viewer sensitivity increases with an increase in total numbers of viewers, the frequency of viewing (e.g., daily or seasonally), and the duration of views (i.e., how long a scene is viewed). Viewer sensitivity is also higher for views seen by people who are driving for pleasure; people engaging in recreational activities, such as hiking, biking, or camping; and homeowners. Viewer sensitivity tends to be lower for views seen by people driving to and from work or as part of their work (USFS 1996; FHWA1981; US Soil Conservation Service 1978). Views from recreation trails and areas, scenic highways, and scenic overlooks are generally assessed as having high viewer sensitivity.

Much of the proposed project would not be visible to sensitive viewer groups with a high concern for aesthetic impacts because it would primarily be located on private land in somewhat remote areas with little public access. Moreover, the rugged terrain and tall vegetation in some areas further limits both the visibility and duration of views of the proposed project in many areas in the vicinity of sensitive viewers. However, portions of the proposed project near the Casitas Substation, south of Lake Casitas, and west of these areas are visible from residences, scenic travel routes, and several recreation areas with high viewer sensitivity. For portions of the proposed project that are visible, key observation points (KOPs) have been selected, and the sensitivity of the viewers is described below using criteria established by the FHWA.

4.1.1.4 Key Observation Points

Much of the proposed project would be located on private land and, due to intervening topography and vegetation, would not easily be visible from residences or public use or recreation areas. Representative views, or KOPs, for portions of the proposed project that are visible by sensitive viewer groups, have been selected and their aesthetic character and quality described using criteria established by the FHWA. Figure 4.1-1 is a reference figure for the KOPs.

KOP 1: View from SR 192/Foothill Road at Carpinteria High School

KOP 1 (Figure 4.1-2) represents the view looking northeast from in front of the Carpinteria Boys and Girls Club on State Route (SR) 192/Foothill Road just south of Carpinteria High School. A large parking lot, a low black fence, a small tree, and the roadway and grass-covered edge are visible in the immediate foreground. A portion of a building at the high school is visible at the far left side of the view. Gray metal lattice and other vertical structures within the Carpinteria Substation are visible at the right side of the view. Blue metal commercial agriculture buildings are also visible. Both wood pole and lattice steel subtransmission structures emerging from the substation dominate the center of the view, along with several tall white light poles in the parking lot. Framed against the blue sky and forming a strong backdrop to the view are the coastal hills, composed of rugged slopes and ridges, jagged background peaks, coarse-textured and dark green vegetation, and contrasting light-colored rock outcrops. Lattice steel structures are visible in a line up the hill in the distant foreground and middleground of the view. Two lattice steel structures are visible, but barely noticeable, at the left side of the view on the ridgetop in the middleground.

The dominance of rugged slopes and ridges, jagged background peaks, coarse-textured and dark green vegetation, and contrasting light-colored rock outcrops contributes to the vividness of views of the coastal hills in the middleground and background of KOP 1. The light gray lattice steel structures on the hillside in the middleground, although visible against the dark green vegetation, tend to contrast only somewhat with their surroundings, and the conductors are almost invisible. The lattice steel structures on the ridgeline approximately 1 mile away are almost unnoticeable against the light sky. No roads or other similar linear forms or lines are visible on the hillside in this view. Vividness, intactness, and unity for the hillsides, ridges, and peaks in the middleground and background are moderately high, given their natural character, high scenic quality, high visual integrity, low degree of visual intrusions, and generally high coherence and compositional harmony. Although the coastal hills are scenic, vividness, intactness, and unity for this overall view are reduced by the presence of dominating structures and elements in the foreground that detract from its visual character and quality. Rigid vertical lines of the subtransmission structures and light poles contrast with the low-angle horizontal roof lines of the metal commercial agriculture buildings and the strong horizontal lines of the high school building. Moreover, the light, thin forms of the vertical structures contrast strongly with the more massive forms of the buildings, as do their colors and textures. Due to the dominance and number of encroaching elements and diversity of forms, lines, colors, and textures in the foreground of this view, vividness, intactness, and unity for this overall view are moderately low.

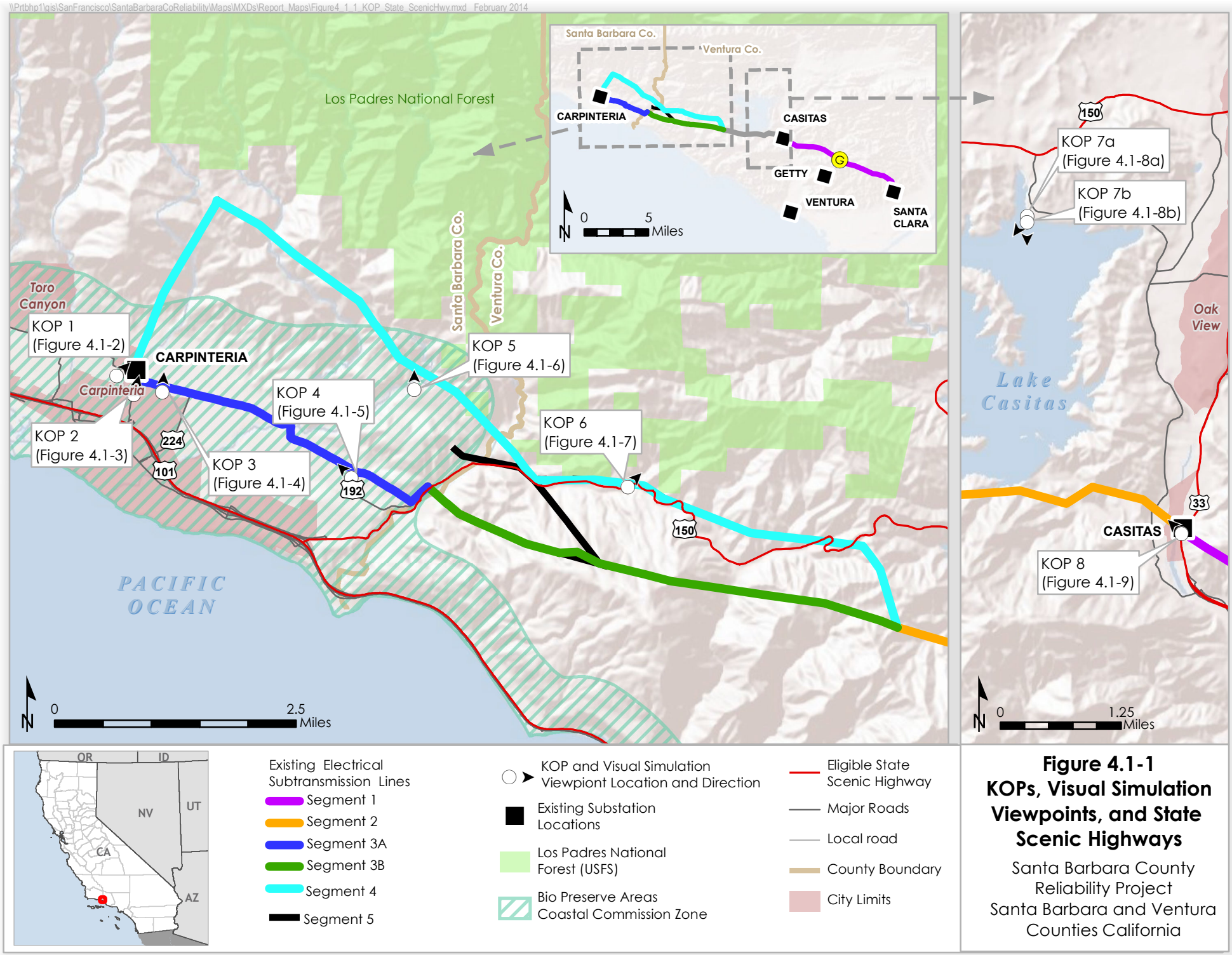

Figure 4.1-1
KOPs, Visual Simulation Viewpoints, and State Scenic Highways

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

Existing view of KOP #1

Visual simulation of KOP #1

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Figure 4.1-2: KOP #1 View from SR 192 / Foothill Road at Carpenteria High School

This and other views from nearby locations along SR 192/Foothill Road are experienced by a large number and variety of viewers on a regular basis, including local residents and tourists. Bicyclists and pedestrians regularly move along this roadway, and the Boys and Girls Club and high school are regular public gathering areas. In addition, the City of Carpinteria has identified SR 192/Foothill Road as a potential future scenic highway designation. For these reasons, viewer sensitivity is moderately high for views from locations along SR 192/Foothill Road.

KOP 2: View from Intersection of Linden Avenue and SR 192/Foothill Road

KOP 2 (Figure 4.1-3) represents the view looking north from the intersection of Linden Avenue and SR 192/Foothill Road. The roadway, tall palm trees and other landscaping, portions of buildings, and several wood and metal power poles dominate the immediate foreground of the view. At the far left of the view, the tops of some structures at the Carpinteria Substation are barely visible; however, most elements of the substation are screened by trees and structures. Portions of a blue metal commercial agriculture building and greenhouses are visible in the center of the view. Framed against the blue sky and forming a strong backdrop to the view are the coastal hills, composed of rugged slopes and ridges, jagged background peaks, coarse-textured and dark green vegetation, and contrasting light-colored rock outcrops. Gray metal lattice steel structures are visible in a line up the hill in the distant foreground and middleground of the view. Two lattice steel structures are visible, but barely noticeable, at the center of the view on the ridgeline in the middleground.

As described for KOP 1, vividness, intactness, and unity for the hillsides, ridges, and peaks in the middleground and background are moderately high because of their natural character, high scenic quality, high visual integrity, low degree of visual intrusions, and generally high coherence and compositional harmony. Due to the dominance and number of encroaching elements and diversity of forms, lines, colors, and textures in the foreground of this view, vividness, intactness, and unity for this overall view are moderately low. Viewer sensitivity is moderately high for views from this and other locations along SR 192/Foothill Road because it is experienced on a regular basis by a large number of viewers with high sensitivity, and the City of Carpinteria has identified SR 192/Foothill Road as a potential future scenic highway.

KOP 3: View from SR 192/Foothill Road at El Carro Park

KOP 3 (Figure 4.1-4) represents the view looking north from SR 192/Foothill Road in front of El Carro Park, Howard Cardon School, and the Girls Inc. nonprofit organization. The roadway, a concrete channel and fences, orderly growing beds with flowers and plants, portions of commercial nursery buildings, and landscaping dominate the immediate foreground of the view. Gray metal lattice steel structures are visible in a line up the slope in the distant middleground of the view. Forming a strong backdrop to the view and framed against the blue sky, the coastal hills consist of rugged slopes and ridges, jagged background peaks, coarse-textured and dark green vegetation, and contrasting light-colored rock outcrops. Several lattice steel structures are visible, but barely noticeable, at the center of the view on the ridgetop in the distant middleground; these structures are more noticeable from KOP 3 than from KOPs 1 and 2 because they are silhouetted against a distant dark green ridge rather than the lighter sky.

Existing view of KOP #2

Visual simulation of KOP #2

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Figure 4.1-3: KOP #2 View from Intersection of Linden Ave. and SR 192 / Foothill Rd.

Existing view of KOP #3

Visual simulation of KOP #3

EE-003948-0001-03TTO.c.ai 2014 (Corp Archives) 01/30/2014

Figure 4.1-4: KOP #3 View from SR 192 / Foothill Rd. at El Carro Park

Similar to KOP 1 and 2, as described above, vividness, intactness, and unity for the hillsides, ridges, and peaks in the middleground and background are moderately high given their natural character, high scenic quality, high visual integrity, low degree of visual intrusions, and high coherence and compositional harmony. Exposed rock outcrops on the left side of the view add visual interest and texture. Due to the lack of encroaching elements and the high degree of visual coherence and compositional harmony of forms, lines, colors, and textures, this overall view has a high degree of vividness, intactness, and unity.

The viewer sensitivity is moderately high for views from this and other locations along SR 192/Foothill Road because the view is experienced on a regular basis by a large number of viewers with high sensitivity and because the City of Carpinteria has identified SR 192/Foothill Road as a potential future scenic highway.

KOP 4: View from SR 192/Casitas Pass Road near Shepard Mesa Road

KOP 4 (Figure 4.1-5) represents the view looking northwest from SR 192/Casitas Pass Road just south of its intersection with Shepard Mesa Road. The foreground of the view is dominated by the roadway, a fence, orderly plantings, portions of commercial nursery fields and buildings, large evergreen and smaller trees, and a row of wood and metal power poles lining the roadway. Framed against the blue sky and forming a strong backdrop to the view, the coastal hills are composed of rugged slopes and ridges, jagged background peaks, coarse-textured and dark green vegetation, and contrasting light-colored rock outcrops.

The hills, ridges, and peaks forming the background exhibit a strong natural character, high scenic quality, and high visual integrity. Likewise, the extensive vegetation and orderly fields in this view provide high visual coherence, compositional harmony, and a strong rural character. The fence in the immediate foreground and the line of tall metal power poles and shorter wood poles are encroaching elements that reduce the intactness and vividness of the view and detract from its overall scenic quality. Because their forms, lines, and colors contrast strongly with their surroundings, the tall metal poles in particular appear out of scale and character with the rural scene. Unity, however, remains moderately high due to the visual coherence and compositional order of this rural landscape view as a whole. Vividness, intactness, and overall scenic quality of this view are moderate due primarily to the presence of the line of tall metal power poles extending from the foreground into the middleground of this view.

The viewer sensitivity is moderately high for views from this and other locations along SR 192/Casitas Pass Road because the view is experienced on a regular basis by a large number of viewers with high sensitivity and because the City of Carpinteria has identified SR 192/Casitas Pass Road as a potential future scenic highway.

Existing view of KOP #4

Visual simulation of KOP #4

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Figure 4.1-5: KOP #4 View from SR 192 / Casitas Pass Road near Shepard Mesa Road

KOP 5: View from Gobernador Canyon Road

KOP 5 (Figure 4.1-6) represents the view looking north from a location along Gobernador Canyon Road. Two residences and some associated structures are partially visible in the foreground. Lattice steel towers (LSTs) are visible in groups in the foreground just beyond the furthest residence, and several LSTs are visibly silhouetted against the sky at the far left of the view. These vertical forms contrast with the more natural forms and lines of the surrounding landscape; however, because of their light texture, their contrast is moderate. Conductors are not readily noticeable in this view. Most of this view is dominated by natural vegetation on hillside slopes and undulating ridges in the distant foreground and middleground and planted vegetation near residences in the foreground. Heavily vegetated slopes and ridges of the coastal hills framed against the blue sky form a moderately strong backdrop to the view. Some natural light-colored rock outcrops and several less noticeable exposed road cuts contrast in color, form, and texture with the darker green, coarse-textured vegetation on the hillsides and near ridge.

The hillsides, ridges, and mix of vegetation and rock outcrops exhibit a strong natural character and moderately high visual integrity and scenic quality. However, the presence of residences, associated structures, and groups of LSTs reduce the intactness and unity of this view to a moderate level. Vividness is also moderate given the absence of unique, striking, or distinctive elements. Overall scenic quality of this view is therefore moderate.

Viewer sensitivity is generally high for residential views in this area. Gobernador Canyon Road is used regularly by local residents, bicyclists, and recreational motorists on a more limited basis. This and other views from the road are generally brief for travelers because of the winding and narrow nature of the road and the presence of dense trees. The overall viewer sensitivity for views from Gobernador Canyon Road would be moderate.

KOP 6: View from SR 150 West of Lake Casitas

KOP 6 (Figure 4.1-7) represents the view looking northeast from a location along SR 150 approximately 3 miles west of Lake Casitas. The roadway, guardrail, wood distribution poles, and several LSTs silhouetted against the sky are visible in the foreground and middleground of the view. Much of this view is dominated by coarse textured natural vegetation on hillside slopes and undulating ridges in the foreground and middleground. A patch of what appears to be stumps of a remnant orchard is on the hillside in the left of the view. Light-colored rock outcrops, some of which may be associated with road cuts, contrast in color with the darker green vegetation on the hillsides and ridges.

The vertical forms of the two groups of LSTs and the wood distribution poles contrast strongly with the more natural forms and lines of the surrounding landscape. Silhouetted above the ridge lines against the blue sky and superior to viewers from the road, these vertical forms are dominant elements in the view. The lighter textures of the smaller LSTs tend to somewhat reduce their dominance and contrast compared to the substantially taller adjacent LSTs. Conductors associated with the LSTs are visible, but not readily noticeable in this view.

Existing view of KOP #5

Visual simulation of KOP #5

EE-003948-0001-03TTO.e.ai 2014 (Corp Archives) 01/30/2014

Figure 4.1-6: KOP #5 View North from Gobernador Canyon Road

Existing view of KOP #6

Visual simulation of KOP #6

EE-003948-0001-03TTO.f.ai 2014 (Corp Archives) 01/30/2014

Figure 4.1-7: KOP #6 View from SR 150 West of Lake Casitas

The hillsides, ridges, and mix of vegetation and rock outcrops exhibit a strong natural character and moderately high visual integrity and scenic quality. However, the strong presence of the two groups of LSTs on the ridges in combination with the roadway, guardrail, wood pole, and conductors in the immediate foreground reduce the intactness and unity of this view to a moderate level. Vividness is moderately low given the absence of unique, striking, or distinctive elements in combination with these other mostly vertical linear elements. The overall scenic quality of this view is therefore moderate.

SR 150 is identified by the state as an eligible state scenic highway. SR 150 is used regularly by recreational motorists, tourists, and recreationists traveling to and from Lake Casitas, areas within the LPNF, and coastal destinations in the vicinity. Viewer sensitivity is generally high for these viewer groups. This and other views from SR 150 are generally brief for travelers because of the winding and narrow nature of this road. However, overall viewer sensitivity for views from SR 150 would be high because of the importance of this road as an eligible state scenic highway and the high sensitivity of viewer groups.

KOPs 7a and 7b: Views from Lake Casitas Marina

KOPs 7a and 7b (Figures 4.1-8a and 4.1-8b) represents views looking south from the boat launch at the established marina, recreation area, and campground on the north side of Lake Casitas. KOP 7a shows boat launch facilities and a linear floating boom in the lake in the foreground. The dam is barely visible on the far side of the lake as a light brown linear feature near the lake edge. KOP 7b shows a boat on the lake; small boats on a dock; and portions of a picnic bench, railing, and linear floating boom in the lake in the foreground. The lake and densely vegetated hillsides and ridges framed against the blue sky dominate both views. Existing subtransmission structures in Segment 2 are barely visible, silhouetted against the sky along a portion of the ridge line approximately 3 miles away.

The hillsides, ridges, and lake exhibit a strong natural character and generally high visual integrity and scenic quality. The subtransmission structures do not reduce the intactness, unity, or vividness of the views from the marina because they are so far away and barely noticeable. Both views are moderately high in intactness, vividness, unity, and scenic quality. Viewer sensitivity is high for these views because this is an important recreation and gathering area, view durations are generally quite long for people using this area, and the viewshed from the lake, including surrounding ridges, is considered a scenic vista. People boating and fishing near the south end of the lake may also have views of the ridges to the south. However, foreground views of the existing subtransmission structures from near the south end of the lake may be largely obscured by intervening topography and vegetation.

KOP 8: View of Casitas Substation from SR 33/North Ventura Avenue

KOP 8 (Figure 4.1-9) shows the view north from SR 33/North Ventura Avenue toward the Casitas Substation. The substation is largely screened from view by large trees; however, portions of large lattice structures, a wall, and other equipment at the substation are visible. The roadway, a wood pole, and overhead conductors dominate much of the immediate foreground of this view. This view is moderately low in intactness and unity due to the mix of structures, forms, lines, and textures. Vividness is low due to a lack of striking or distinctive elements or patterns in the view. Overall, scenic quality is moderately low for this view.

Figure 4.1-8a: KOP #7a View from Lake Casitas Marina

Figure 4.1-8b: KOP #7b View from Lake Casitas Marina

Figure 4.1-9: KOP #8 View of Casitas Substation from SR 33 / North Ventura Avenue

SR 33/North Ventura Avenue is identified by the state as an eligible state scenic highway. SR 33/North Ventura Avenue is used regularly by recreational motorists, tourists, and recreationists traveling to and from Lake Casitas, the community of Ojai, areas within the LPNF, and coastal destinations in the vicinity. Viewer sensitivity is generally high for these viewer groups. Although the volume of use by sensitive viewers is high for this road, the duration of views of the substation is quite short. However, overall viewer sensitivity for views of the substation from SR 33/North Ventura Avenue would be moderately high because of the importance of this road as an eligible state scenic highway and the high sensitivity of viewer groups.

4.1.1.5 Scenic Vistas

The Ventura County General Plan designates the viewshed of Lake Casitas, including the area south and west of the lake crossed by a portion of the proposed project as a Scenic Resource Area (Ventura County 2011a, 2011c). In addition, the Ojai Valley Area Plan (Ventura County 2008) identifies ridgelines and other sensitive landscape features in the plan area as important scenic features requiring special consideration and protection and has mapped these within a designated *Scenic Resource Protection Overlay* zone. Based on these local plan designations, views of ridges, including those south of and visible from the lake, within these designated areas would be considered scenic vistas. KOP 7 is representative of views of scenic vistas within this area. No other designated scenic vistas occur in the project area.

4.1.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern aesthetics in the project area.

4.1.2.1 Federal

Los Padres National Forest Land Management Plan

The Los Padres National Forest Land Management Plan (LMP) governs activities and guides resource use and protection for the approximately 1.8-million-acre LPNF. A small portion of the proposed project would cross areas identified as the Santa Barbara Front Place in the LMP (USFS 2005a). The LMP emphasizes the scenic and aesthetic values of the Santa Barbara Front Place, stating that it provides "a rugged, wild-appearing highly scenic backdrop" for views from coastal communities, it is "one of the 'Key Places' representing the most picturesque national forest locations," and it "affords immediate access for urban areas to a natural forest environment and is an important area for viewing scenery" (USFS 2005a). Recognizing its value to people and the local and regional economy, the LMP states that "the scenic backdrop of the Place adds to the value of adjacent coastal and inland properties" (USFS 2005a).

The LMP identifies the Desired Condition for the Santa Barbara Front Place as "maintained as a natural appearing landscape that functions as a scenic backdrop for urban coastal communities" and its Program Emphasis for most of the area to be "managed as a Developed Area Interface zone while keeping the natural scenic backdrop for the south coast communities" (USFS 2005a).

The LMP identifies the following program strategies for landscape aesthetics (USFS 2005a):

> *LM 1 - Landscape Aesthetics*
> *Manage landscapes and built elements to achieve scenic integrity objectives:*
> - *Use best environmental design practices to harmonize changes in the landscape and advance environmentally sustainable design solutions.*
>
> *LM 2 - Landscape Restoration*
> *Restore landscapes to reduce visual effects of nonconforming features:*
> - *Prioritize landscape restoration activities in key places. Integrate restoration activities with other resource restoration.*
>
> *LM 3 - Landscape Character*
> *Maintain the character of key places to preserve their intact nature and valued attributes:*
> - *Maintain the integrity of the expansive, unencumbered landscapes and traditional cultural features that provide the distinctive character of the place.*
> - *Promote the planning and improvement of infrastructure along scenic travel routes.*

The LMP identifies the following Aesthetic Management Standards for the forest:

> *S9: Design management activities to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map.*
>
> *S10: Scenic Integrity Objectives will be met with the following exceptions:*
> - *Minor adjustments not to exceed a drop of one SIO level is allowable with the Forest Supervisor's approval.*
> - *Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.* (USFS 2005b)

In compliance with the USFS's Scenery Management System, the LPNF has assigned SIOs to lands under its administration to protect scenery resources and guide management decisions for aesthetics. SIOs assigned to forest lands crossed by the proposed project are identified as High (USFS 2005c). According to the USFS (1995), "High scenic integrity refers to landscapes where the valued landscape character 'appears' intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident." The intent for the High SIO designation is for these lands to appear essentially unaltered.

4.1.2.2 State

California Streets and Highways Code

The California Department of Transportation administers the State Scenic Highway Program to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways (California Streets and Highways Code § 260, *et seq.*). The State Scenic Highway Program identifies a list of highways that are either eligible for designation as scenic highways or have been officially designated as such. These highways are identified in California Streets and Highways Code § 263. The program entails regulation of land use and density of development; attention to the design of sites and structures; attention to and control of signage, landscaping, and grading; and other restrictions. The local jurisdiction is responsible for adopting

and implementing such regulations. If a highway is listed as eligible for official designation, it is also part of the Scenic Highway System and care must be taken to preserve its eligibility status.

Eligible state scenic highways identified in the vicinity of the proposed project include SR 150 in Santa Barbara County, and SR 150 and SR 33 in Ventura County (Figure 4.1-1). The northern portion of SR 33 in Ventura County is officially designated as a state scenic highway; however, the proposed project would not be visible from this section of the highway (Caltrans 2012).

Coastal Protection Act

The proposed project would not be located within the designated Coastal Zone in Ventura County. Portions of the proposed project would lie within the designated Coastal Zone of Santa Barbara County and would therefore be subject to provisions of the California Coastal Act of 1976. This act acknowledges the importance of protecting the aesthetic character and quality of the coastal zone as follows:

> *The scenic and visual qualities of coastal areas will be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with surrounding areas, and where feasible to restore and enhance visual quality in visually degraded areas.* (Public Resources Code § 30251)

In conformance with provisions of the California Coastal Act of 1976, the California Coastal Commission has authorized Santa Barbara County to manage lands within its designated Coastal Zone according to an approved local coastal program. Santa Barbara County administers this program through its certified coastal land use plan and coastal zoning ordinance. Policies and guidance relevant to aesthetic resources in Santa Barbara County's Coastal Zone are identified in Section 4.1.2.3, below.

4.1.2.3 Regional and Local

The California Public Utilities Commission (CPUC) has jurisdiction over siting and design and regulates construction of investor-owned transmission projects such as the proposed project. Although the CPUC has preemptive authority over local government land use planning regulations, it is required to consult with the local agencies on land use matters. The regional and local plan policies, ordinances, and guidelines identified below for protecting and managing aesthetic resources in the project area provide a framework for local agency consultation.

Santa Barbara County Comprehensive Plan - Coastal Land Use Plan

The Santa Barbara County Comprehensive Plan - Coastal Land Use Plan states: "All electric transmission lines proposed for the coastal zone are developments under the Coastal Act, thus the County will have permit review over them after certification" (Santa Barbara County 2009a, p. 75). This plan identifies the following concerns and policies for protecting and managing scenery in the project area.

> *30251. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.*

> *The primary concerns are associated with overhead electric transmission lines and their long-term impacts on views and visual resources. Visual impacts are particularly severe in undeveloped areas, especially the foothills and upland areas, and along the coastal terrace. Mitigating measures are limited at this time to alternate route locations and undergrounding of lines, which is expensive*. (Santa Barbara County 2009a, p.75)

Santa Barbara County Comprehensive Plan – Scenic Highways Element

The Santa Barbara County Comprehensive Plan - Scenic Highways Element identifies procedures for identification and designation of both state scenic highways and county scenic highways (Santa Barbara County 2009b). The plan element states: "The scenic vistas along Santa Barbara County's highways are a valuable resource. Preservation of this resource is important to both present and future County residents. The policies and program outlined in this Scenic Highway Element may form a significant part of this County's endeavor to preserve its renowned scenic resources" (Santa Barbara County 2009b). The plan element identifies SR 150 as an eligible state scenic highway in the project area.

Santa Barbara County Article II Coastal Zoning Ordinance

Article II of the Santa Barbara County Coastal Zoning Ordinance contains the following purposes regarding protection and management of visual resources in the project area (County of Santa Barbara 2014, Section 35-50):

> Purpose 1: *Protect, maintain, and where feasible, enhance and restore the overall quality of the Coastal Zone environment and its natural and manmade resources.*
>
> Purpose 6: *Protect the character and stability (social and economic) of agricultural, residential, commercial, and industrial areas.*

In addition, the Coastal Zoning Ordinance identifies the following guidelines applicable to ridgeline and hillside development in rural and inner rural areas designated on Local Coastal Program maps (County of Santa Barbara 2014, Section 35-144.3(2)):

> *d. Large, visually unbroken and/or exposed retaining walls should be minimized.*
> *f. Landscaping should be used to integrate the structure into the hillside, and shall be compatible with the adjacent vegetation.*
> *g. Grading shall be minimized, in accordance with the Comprehensive Plan goals.*

Ventura County General Plan

The Ventura County General Plan identifies the importance of protecting the varied and unique scenic resources of the county and provides that special attention be given to protecting the viewsheds of lakes and scenic highways (Ventura County 2011a). The viewshed of Lake Casitas, including the area south and west of the lake crossed by a portion of the proposed project, is designated as a Scenic Resource Area. General plan goals and policies for protecting the County's scenic resources are identified below (Ventura County 2011a, p.21).

> *1.7.1 Goals*
> *1. Preserve and protect the significant open views and visual resources of the County.*
> *2. Protect the visual resources within the viewshed of lakes and State and County designated scenic highways, and other scenic areas as may be identified by an area plan.*

1.7.2 Policies
2. Scenic Resource Areas, which are depicted on the Resource Protection Map (Figure 1), shall be subject to the Scenic Resource Protection (SRP) Overlay Zone provisions and standards set forth in the Non-Coastal Zoning Ordinance, which include the following:
(2) Removal, damaging or destruction of protected trees shall be in compliance with the County's "Tree Protection Regulations" of the Non-Coastal Zoning Ordinance.
(3) All discretionary development shall be sited and designed to:
a. Prevent significant degradation of the scenic view or vista;
b. Minimize alteration of the natural topography, physical features and vegetation;
c. Utilize native plants indigenous to the area for re-vegetation, whenever possible;
d. Avoid silhouetting of structures on ridge tops that are within public view.
e. Use colors and materials that are designed to blend in with the natural surroundings.
f. Minimize lighting that causes glare, illuminates adjacent properties, or is directed skyward in rural areas

In its General Plan Resources Appendix, the County has identified Designated and Eligible Scenic Highways that include both state and county scenic highways (Ventura County 2011b). In addition to eligible state scenic highways, the County has identified Santa Ana Road, which is east of Lake Casitas, as an eligible county scenic highway. The local scenic highways program includes standards for grading, vegetation removal, landscaping, and the design and appearance of structures in viewshed corridors of these scenic highways.

The Ventura County Non-Coastal Zoning Ordinance (Ventura County 2011c) identifies various requirements for development within the Scenic Resources Protection Overlay Zone for Lake Casitas. These requirements address avoidance of silhouetting structures on ridgelines visible to the public from roads, the lake, or other public view locations; removal of native vegetation; and grading activities. The following are identified purposes of this overlay zone (Ventura County 2011c):

a. To preserve and protect the visual quality within the viewshed of selected County lakes, along the County's adopted scenic highways, and at other locations as determined by an Area Plan.
b. To minimize development that conflicts with the value of scenic resources.
c. To provide notice to landowners and the general public of the location and value of scenic resources which are of significance in the County.

Ojai Valley Area Plan

The proposed project would cross a portion of the area within the jurisdiction of the Ojai Valley Area Plan (Ventura County 2008). Important goals of this plan address the need to "preserve and protect the character of the Ojai Valley and ensure and maintain the quality of life for its residents" and "ensure that any future development within the study area is of high quality, consistent with the character of the Ojai Valley and beneficial to the community as a whole" (Ventura County 2008). The area plan identifies ridgelines and other landscape features as important scenic features in the area that require special consideration and protection because of their visibility and

visual sensitivity. Specific goals and policies addressing protection of scenic resources in the area applicable to the SBCRP include the following (Ventura County 2008):

> *Goals:*
> *1. Preserve and protect the significant visual quality and aesthetic beauty of the Ojai Valley which includes, but is not limited to, surrounding mountains, hills, and ridgelines, arroyos, barrancas and protected trees.*
> *2. Preserve the scenic view of State, Federal and local park land in and around the Ojai Valley.*
> *3. Ensure that discretionary development on or near ridgelines minimizes impacts from grading activities in order to preserve the natural beauty of the area.*
> *Policies:*
> *1. Discretionary development/grading which will significantly degrade or destroy a scenic view or vista from public roads or publicly-owned land shall be prohibited, unless the development/grading is a public project, or a private project for which there is a substantial public benefit, and overriding considerations are adopted by the decision-making body.*
> *2. The area within 400 feet (horizontal) of prominent ridgelines as shown in Figure 2 shall be zoned "Scenic Resource Protection Overlay" in order to ensure that visual impacts of grading and attendant structures are minimized to the maximum extent feasible. Discretionary development shall be located and designed to minimize visibility and silhouetting against the skyline as viewed from nearby public roads, and shall incorporate as many of the following planning techniques as feasible:*
> *a. Limit construction to single-story structures on or near ridgelines;*
> *b. Utilize large building pad setbacks (50 feet or more) from the edge of a ridgeline;*
> *c. Utilize berms and landscaping to soften the visual impact of homes and graded areas.*

City of Carpinteria General Plan

The City of Carpinteria has identified the importance of preserving the character and unique visual resources of the community through protection of open space and designation of scenic highways and vistas. The visual resources section of the City's general plan states:

> *Preservation of views throughout Carpinteria aids in establishing community identity and promoting aesthetic appeal by providing visual access to landforms, urban forms and environments that are familiar to local residents and unique to the city. Carpinteria's creeks, beaches, open spaces, foothills, agricultural lands, urbanized areas, landscapes and landforms are all potential subjects for scenic views. Scenic views of agriculturally productive land, particularly in the foothills, can be seen from a variety of locations.* (City of Carpinteria 2003)

The City has established policies that require new developments to protect scenic resources and be designed to fit with site conditions. Eligible state scenic highways in Carpinteria include SR 150 and U.S. 101. In addition, the City intends to pursue designation of these routes and SR 192 as scenic highways and protect scenic vistas associated with these routes (City of Carpinteria 2003).

4.1.3 Impact Analysis

4.1.3.1 Methodology and Significance Criteria

Methodology

The methodology used for this visual assessment is based on the FHWA's visual impact assessment system (FHWA 1981) in combination with other established visual assessment systems. The FHWA's methodology for Visual Impact Assessment for Highway Projects (FHWA 1981) is often used to assess the potential visual impacts of proposed development projects with a variety of different landscape settings. The visual impact assessment process involves identification of the following:

- Visual resources (i.e., visual character and quality) of the region and the immediate project area.
- Important viewing locations (e.g., roads, trails, and overlooks) and the general visibility of the project area and the site using descriptions and photographs.
- Viewer groups and their sensitivity.
- Relevant federal, state, and local government policies and concerns for protection of visual resources.
- Impacts and the levels of significance of visual impacts of the proposed project.
- Mitigation measures that would reduce impacts to less than significant levels.

Significance Criteria

The significance criteria are defined based on the checklist items in Appendix G of the CEQA Guidelines. An impact is considered significant if the project would:

a) Have a substantial adverse effect on a scenic vista;

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

c) Substantially degrade the existing visual character or quality of the site and its surroundings; or

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

4.1.3.2 Applicant Proposed Measures

There are no Applicant Proposed Measures associated with aesthetics for the proposed project.

4.1.3.3 Environmental Impacts

Impact AE-1: Have a substantial adverse effect on a scenic vista.
LESS THAN SIGNIFICANT

The viewshed of Lake Casitas and the ridgelines and other sensitive landscape features surrounding Lake Casitas areas are the only designated scenic vistas in the project area. These scenic vistas are represented by KOPs 7a and 7b. Segment 2 would cross the south and west areas of Lake Casitas. The proposed project would involve installing telecommunications cable on the existing subtransmission structures along Segment 2. No visual simulations were prepared for the views from the Lake Casitas marina, as these new cables would not be visible from the marina or the lake.

During construction, helicopters may be used in various locations and at various times for transporting construction workers, delivering materials and equipment to construction areas, placing structures, installing hardware, stringing conductors and telecommunications cable, and installing marker balls. In this area, helicopters may be used primarily to install telecommunications cable. Although helicopters would be visible within scenic vistas in the Lake Casitas viewshed to viewers with high sensitivity, the helicopters would be visible intermittently for brief periods or regularly over the course of several days for some operations. Because views of helicopters would be generally short-term and temporary during construction, the impacts to scenic vistas would be less than significant.

During operation, the visual character and quality of scenic vistas would not be degraded because the cables would not be easily visible. Helicopters may be used during operation for line inspections, repairs, and other activities similar to those identified above for construction. Similar to those activities, helicopters would be visible intermittently for brief periods or regularly over the course of several days for some operations. Because views of helicopters would be generally short-term and temporary during operation, the impacts to scenic vistas would be less than significant, and no other noticeable alterations to views from the marina or other scenic vistas would result from implementation of the proposed project. Therefore, long-term impacts to scenic vistas would be less than significant.

Impact AE-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Construction of the proposed project would take place over a 24-month period. Construction activities associated with the subtransmission and telecommunication lines would take place for shorter durations along the proposed route. Construction activities would be noticeable to residents and motorists along SR 150 and SR 33. Construction activities that may increase visual contrast include the following:

- Vehicles and equipment used for excavation and grading activities, transporting and lifting, watering to control dust, worker transport, and other construction activities.
- Soil and vegetation removal at new structure sites and for access roads.

- Temporary outdoor storage of materials, stockpiling of spoils from excavation, security fencing, and construction signage.
- Helicopter activities for transporting construction workers, delivering materials and equipment to construction areas, placing structures, installing hardware, stringing conductors and telecommunications cable, and installing marker balls.

Construction at the Casitas Substation and along the eastern terminus of Segment 2 and the western terminus of Segment 1 near SR 33 would be predominately shielded by existing vegetation and topography from the view of motorists on SR 33. Impacts to motorists during construction would be less than significant.

Temporary changes to aesthetic resources associated with construction of the proposed project would detract from the existing views for motorists on SR 150 at the following areas of the proposed project:

- Eastern terminus of Segment 3A near SR 150.
- Western terminus of Segment 3B near SR 150.
- Segment 4 within Ventura County were it would cross SR 150.
- Staging Yards 3, 4, and 6 near SR 150.

The proposed project's impact on SR 150 would be significant due to the construction disturbance that would be viewed by motorists. Mitigation Measure (MM) BIO-5 would require the applicant to revegetate temporarily disturbed areas. MM AE-2 would require the applicant to keep all construction sites viewable from residences, highways, and roads clean and orderly. Implementation of BIO-5 and AE-2 would reduce impacts to scenic highways during construction to less than significant.

Operation

The new TSP monopole structures would appear slightly taller and exhibit a more solid form with a larger diameter pole than the LSTs they are replacing. Also, in several locations visible from SR 150, existing subtransmission structures would be replaced by substantially taller and wider J-tower structures. The new J-tower structures would exhibit a similar form, but would appear substantially taller and wider than the existing LSTs they are replacing. Silhouetted against the blue sky and dark green vegetation along the ridgeline, both the new TSPs and J-towers tend to contrast with their surroundings more than the LSTs they are replacing and would be more noticeable in the foreground and near middleground of the views from SR 150.

The visual simulation for KOP 6 (Figure 4.1-7) shows the TSP subtransmission structures for Segment 4 in the vicinity of SR 150 that would result in long-term impacts to the existing view. The new crib wall retaining structure in the visual simulation for KOP 6 appears light gray in color, with horizontal rows of dark shadows separated by vertical support columns. Its engineered texture and rectilinear form elements contrast strongly with the textures, forms, lines, and colors of nearby surrounding green vegetation, brownish rock outcroppings, and tan barren areas. Although its light gray color is similar to that of nearby stumps, its form elements contrast with their forms. Because of its high contrast with its surroundings, the crib wall tends to be very noticeable. The new conductors appear slightly more visible against the sky than the existing ones that have been removed in this view. Marker balls are new elements visible against the sky above the ridge that

contrast with their surroundings in line, color, and form. However, the three marker balls are not dominant elements in this view and do not readily draw viewers' attention. Occasional use of helicopters for operations and maintenance activities (e.g., line inspections and repairs) would be short term and temporary and would not create substantial long-term contrast. The project would not substantially damage or degrade the existing scenic resources in the vicinity of SR 150, with the exception of the retaining walls and the J-tower structures visible from SR 150.

The retaining walls would affect the intactness and unity of views from SR 150 and negatively affect the quality and character of views from this eligible state scenic highway. Likewise, the J-tower structures visible from SR 150 would affect the intactness and unity of views from SR 150 and negatively affect the quality and character of views from this eligible state scenic highway. Impacts for both of these project components would be substantial and significant. Implementation of MM AE-3 requires retaining walls to be finished with color or surface applications that would help blend them into their surroundings. MM AE-4 requires all new transmission structures to be non-reflective and transmission conductors to be non-specular to reduce glare and color contrast and help blend these elements with their surroundings. Implementation of MM AE-3 and MM AE-4 would reduce impacts to scenic resources within the eligible state scenic highway to less than significant.

Motorists along SR 33 would not generally notice operation of the project, as elements placed within the substation would be similar to existing elements in the substation and partially or mostly screened from view by the existing topography and vegetation (KOP 8; Figure 4.1-9). A new TSP on the east side of the Casitas Substation would be partially visible to travelers from the road. The TSP would not contrast strongly with its surroundings because it would be located near other existing large vertical structures associated with the substation. The moderately low intactness and unity, as well as the low vividness, of this view would not be substantially reduced by its introduction. Removal and undergrounding of overhead conductors near the Casitas Substation would somewhat improve the intactness and unity of views from the road. Because the new elements introduced within and near the substation would not contrast strongly with their surroundings, and overall visual quality of views from the highway would not be substantially reduced, scenic resources within the eligible state scenic highway would not be substantially damaged. Therefore, this aesthetic impact would be less than significant.

Impact AE-3: Substantially degrade the existing visual character or quality of the site and its surroundings.

LESS THAN SIGNIFICANT WITH MITIGATION

Construction

In addition to impacts on visual character and quality from construction of the proposed project described above under Impacts BIO-5 and AE-2, the changes in aesthetic resources due to construction-related activities would be visible to motorists on SR 150, SR 33, and local roads; residents of the cities of Carpinteria and Ventura; rural residences in unincorporated Santa Barbara and Ventura Counties; and recreational groups, including recreational motorists and visitors to Lake Casitas and LPNF. Impacts on aesthetic resources would be more acute for viewer groups that have increased sensitivity, as described in Section 4.1.1.3. Construction-related impacts would be greatest in areas where extensive soil and vegetation removal would be required, such as Segments 3B and 4. Impacts from construction activities, however, would be temporary, and implementation of MM BIO-5 would ensure that areas temporarily disturbed during construction would be revegetated, which would shorten the duration that disturbed areas would be viewable. Implementation of MM AE-2 would require the applicant to make construction site as

inconspicuous as possible. Therefore, impacts during construction would be less than significant with mitigation under this criterion.

Operation

As shown in the visual simulations for KOPs 1 through 3 (Figures 4.1-2 through 4.1-4), TSPs would replace the existing lattice steel structures for the subtransmission line running up to and on top of the ridge with the exception of the structures at Construction Sites 128 and 132 (Segment 4). The TSP monopole structures are taller than the LSTs they are replacing and, because of their greater height, solid form, larger diameter, and light color, tend to contrast more with the dark green hillside vegetation and be more noticeable in the distant foreground and middleground. At Construction Sites 128 and 132, the existing lattice steel structures would be replaced by substantially taller J-tower structures as shown in the visual simulations for KOPs 1 through 3 (Figures 4.1-2 through 4.1-4). Because of its greater height, larger form, light color, and prominent position, the J-towers at Construction Site 132 and 128 would contrast more with the dark green hillside vegetation and be more noticeable silhouetted on the ridge line in the middleground of the views from KOPs 1 through 3.

The addition of the new TSPs and J-towers would substantially reduce the intactness, unity, and vividness of views of these scenic hills from KOPs 1 through 3 and other locations along SR 192 in the vicinity. Viewer groups in this area include local residents and tourists. Additionally, SR 192 is being considered by the City of Carpinteria for future designation as a scenic highway, and views of surrounding hills and ridges are identified in local plans as important scenic resources by both the Santa Barbara County and the City of Carpinteria; therefore, viewer sensitivity is moderately high. The proposed project would substantially damage the visual quality of KOPs 1 through 3 and this impact would be significant. Implementation of MM AE-1, MM AE-3, and MM AE-4 would reduce impacts to less than significant.

As shown in the visual simulation for KOP 4 (Figure 4.1-5), wood distribution structures have been removed and the conductors, insulators, and support structures placed on the existing lightweight steel structures. Removal of the wood poles slightly improves the unity of the view by reducing the amount of contrasting vertical elements. However, intactness, vividness, and overall scenic quality remain moderate for this overall view, as well as views from other nearby locations along SR 192 in the vicinity. Overall viewer sensitivity is moderately high for views from this and other locations along SR 192. The proposed project would not substantially damage scenic resources that would be viewed by viewers with moderately high sensitivity from within a potential state scenic highway because overall vividness, intactness, unity, and scenic quality would remain moderate and essentially unchanged for this overall view. Therefore, for the reasons described above, this aesthetic impact would be less than significant.

As shown in the visual simulation for KOP 5 (Figure 4.1-6), TSPs would be taller than the LSTs they are replacing and, because of their greater height, solid form, larger diameter, and light color, tend to contrast more with the darker green hillside vegetation and be more noticeable in the foreground and near middleground of the view. The new retaining walls for access roads visible at the center and right sides of the view in KOP 5 appear dark gray in color; however, under different lighting conditions where their concrete surfaces will appear lighter and brighter in color, they will contrast with the green hillside vegetation and natural rock outcroppings. Their strong horizontal lines and forms in combination with their light color and regular textural pattern will cause them to be noticeable. Although the coarseness and variety of built elements tend to somewhat reduce their contrast, the retaining walls will be noticeable in this view from the road and nearby residences.

The marker balls and conductors contrast with their surroundings but do not substantially reduce vividness, intactness, and unity in this view given other more dominant contrasting elements.

The addition of the new TSPs, in combination with the visibility of conductors and marker balls above the ridge line and access road retaining walls on the hillside somewhat reduce the overall intactness, unity, and vividness of this view and other similar views from Gobernador Canyon Road. However, the retaining walls would contribute to substantially reducing the intactness and unity of views from Gobernador Canyon Road, thus reducing the overall scenic quality of views for sensitive viewers in this area. Therefore, the proposed project would substantially damage or degrade the existing scenic resources in views from Gobernador Canyon Road, and this impact would be significant, requiring mitigation.

Implementation of MM AE-3 would require retaining walls to be finished with color or surface applications that would help blend them into the surroundings. Implementation of MM AE-3 would reduce impacts to visual quality to less than significant.

Impact AE-4: Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

LESS THAN SIGNIFICANT WITH MITIGATION

Construction

Project construction equipment and materials may generate glare during daytime hours; however, impacts would be temporary and dependent upon the location of the sun and the orientation of the construction equipment. Impacts from glare during construction would be less than significant.

Construction of the proposed project would occur primarily during daytime hours. However, there is a possibility that some construction could occur at night, and temporary artificial illumination could be required. Lighting, if needed, would be used to protect the safety of the construction workers; lights would be oriented and shielded to minimize their effect on any nearby sensitive receptors. Potential impacts from lighting that may be needed during construction would be temporary and considered less than significant. Impacts from the generation of light during construction would be less than significant.

Operations

No new lighting would be needed at Casitas Substation or Santa Clara Substation. The modification of existing task lighting at Carpinteria Substation would be similar to what is currently installed at the substation. Therefore, the change would be minor and incremental. This new task lighting would not create a new source of substantial light that would adversely affect day or nighttime views in the area, and thus the impact would be less than significant.

The proposed project would introduce new sources of glare because some components of the project have reflective surfaces. The new towers and conductors would be reflective when first installed but would weather to a dull gray finish. New telecommunications cable would be a dull aluminum gray. Implementation of MM AE-4 would require the applicant to treat or use materials that are non-reflective to reduce glare of new transmission structures and conductors. Therefore, no substantial light and glare effects would occur with mitigation.

4.1.4 Mitigation Measures

MM AE-1: Minimize Permanent Disturbance Aesthetic Impacts. The applicant shall implement methods to restore permanent disturbed areas to conditions that would blend with the overall landscape character to the extent feasible.

MM AE-2: Construction Site Upkeep. The applicant will keep all construction sites clean and orderly and will ensure that building materials and equipment are as inconspicuous as possible (e.g., screened or stored away from public view).

MM AE-3: Reduce Aesthetic Impacts of Retaining Walls and Access Road Improvements. For all retaining walls, other mechanically stabilized embankments (MSEs), and access road improvements (e.g., cut and fill slopes) visible from residences, public use or recreation areas, or publicly accessible state and county roads, aesthetic impacts will be reduced through application of techniques that minimize contrast with colors, forms, and textures within the surrounding landscape setting. Visible portions of concrete crib walls, other MSEs, and cut and fill slopes with exposed soil and/or rock will use finish colors and/or surface applications that help substantially blend these structures with their surroundings. Surface applications to reduce contrast may include non-toxic, long-lasting darkening agents; other non-toxic color contrast reduction agents; rock applications; and/or naturalistic surface patterning. Native vegetation will be planted in locations in close proximity to concrete crib walls, other MSEs, and cut and fill slope that will help screen these elements from public views and blend them with their surroundings.

MM AE-4: Glare and Color Contrast Reduction for Transmission Structures and Conductors. To reduce potential glare and color contrast for components of the proposed project, the finish on all new transmission structures will be non-reflective, such as steel that has been galvanized and treated to create a dulled finish, to reduce light reflection and color contrast and help blend the structures into the landscape setting. All new transmission conductors will be non-specular to minimize conductor reflectivity and help blend them into the landscape setting. J-Tower structures will have a non-reflective, self-weathering steel or steel that has been treated with a long-lasting coating that is medium to dark brown or medium to dark green in color and has a dulled finish to reduce light reflection and help blend the selected structures into the landscape setting.

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4.2 Agriculture and Forestry Resources

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to agricultural resources. The work associated with the Getty, Goleta, Ortega, Ventura, and Santa Barbara Substations would occur within existing structures and would have no impact on agriculture and forestry resources; therefore, these components are not discussed further in this section. Agricultural uses are addressed in this section and in Section 4.10, "Land Use."

4.2.1 Environmental Setting

The proposed transmission and telecommunications line segments would extend from the existing Santa Clara Substation in northwest Ventura County to the Carpinteria Substation, located in the City of Carpinteria in southeast Santa Barbara County, crossing portions of unincorporated Santa Barbara and Ventura Counties, and the city of Carpinteria. The proposed project would cross land with a variety of uses, including rural, agricultural, open space, urban, residential, and forest land. Modifications and upgrades to the existing Santa Barbara and Ortega Substations (located within the City of Santa Barbara), as well as the Ventura Substation (located within the City of Ventura) would occur within the existing substation boundaries. A portion of Segment 4 of the proposed project would be located within existing Southern California Edison (SCE) right-of-way (ROW) in the Los Padres National Forest (LPNF). Figure 4.10-2 in Section 4.10, "Land Use," depicts the land uses and planning areas for each component of the proposed project, including the boundaries of the LPNF.

4.2.1.1 Agricultural Land

Santa Barbara County

In Santa Barbara County, agriculture accounted for a gross value of approximately $1,291,008,000 in 2012 (Santa Barbara County Agricultural Commission 2013). The county primarily produces vegetable crops, fruits and nuts, and nursery products such as cut flowers, with strawberries being the number one crop. According to the California Department of Conservation, an estimated 581,642 acres in the county are suitable for grazing lands (CDC 2010a). According to the California Farm Bureau Federation, the county's agricultural value ranked 14th in California in 2011 (CFBF 2013a).

Approximately 12 percent of the total acreage of Santa Barbara County is classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance (Important Farmland) (Table 4.2-1).

Table 4.2-1 Summary of Important Farmland in Santa Barbara County

	Inventoried Acreage in Santa Barbara County	Percent of Total Acreage in Santa Barbara County
Prime Farmland	66,568	6.4%
Farmland of Statewide Importance	12,475	1.2%
Unique Farmland	35,606	3.4%
Farmland of Local Importance	10,643	1%
Important Farmland Total	**125,112**	**12%**

Source: CDC 2010a

Ventura County

In Ventura County, agriculture accounted for a gross value of approximately $1,844,260,000 in 2011 (Ventura County Agricultural Commission 2012). According to the County Agricultural Commission's 2011 Crop Report, released in 2012, the county primarily produces fruit and nut crops, vegetable crops, livestock and poultry products, apiary products (e.g., honey), and nursery products. Fruit and nut crops represent over 50% of all agricultural production within the county, with strawberries being the number one crop. Approximately 197,278 acres within the county are considered suitable for grazing lands (CDC 2010b). According to the California Farm Bureau Federation, Ventura County's agricultural value ranked 10th in California in 2011 (CFBF 2013b).

Approximately 20 percent of the total acreage of Ventura County is classified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance (Important Farmland) (Table 4.2-2). Figure 4.2-1 shows farmland classifications within the project area for components in both Santa Barbara and Ventura Counties.

Table 4.2-2 Summary of Important Farmland in Ventura County

	Inventoried Acreage in Ventura County	Percent of Total Acreage in Ventura County
Prime Farmland	42,420	7.1%
Farmland of Statewide Importance	33,482	5.6%
Unique Farmland	28,793	4.8%
Farmland of Local Importance	14,988	2.5%
Important Farmland Total	**119,683**	**20%**

Source: CDC 2010b

4.2.1.2 Forest Land

Los Padres National Forest

The LPNF encompasses almost 2 million acres, extending from the west boundary of Los Angeles County to mid-Monterey County (USFS 2007). The forest is divided by land use zone, and further subdivided into places, which are geographical units within similar landscapes. Segment 4 would cross 3,375 feet of the LPNF area designated as a Back Country (Motorized Use Restricted) land use zone, which allows major utility corridors in designated areas (USFS 2005). Segment 4 would cross the place known as the Santa Barbara Front Area (see also Section 4.10, "Land Use").

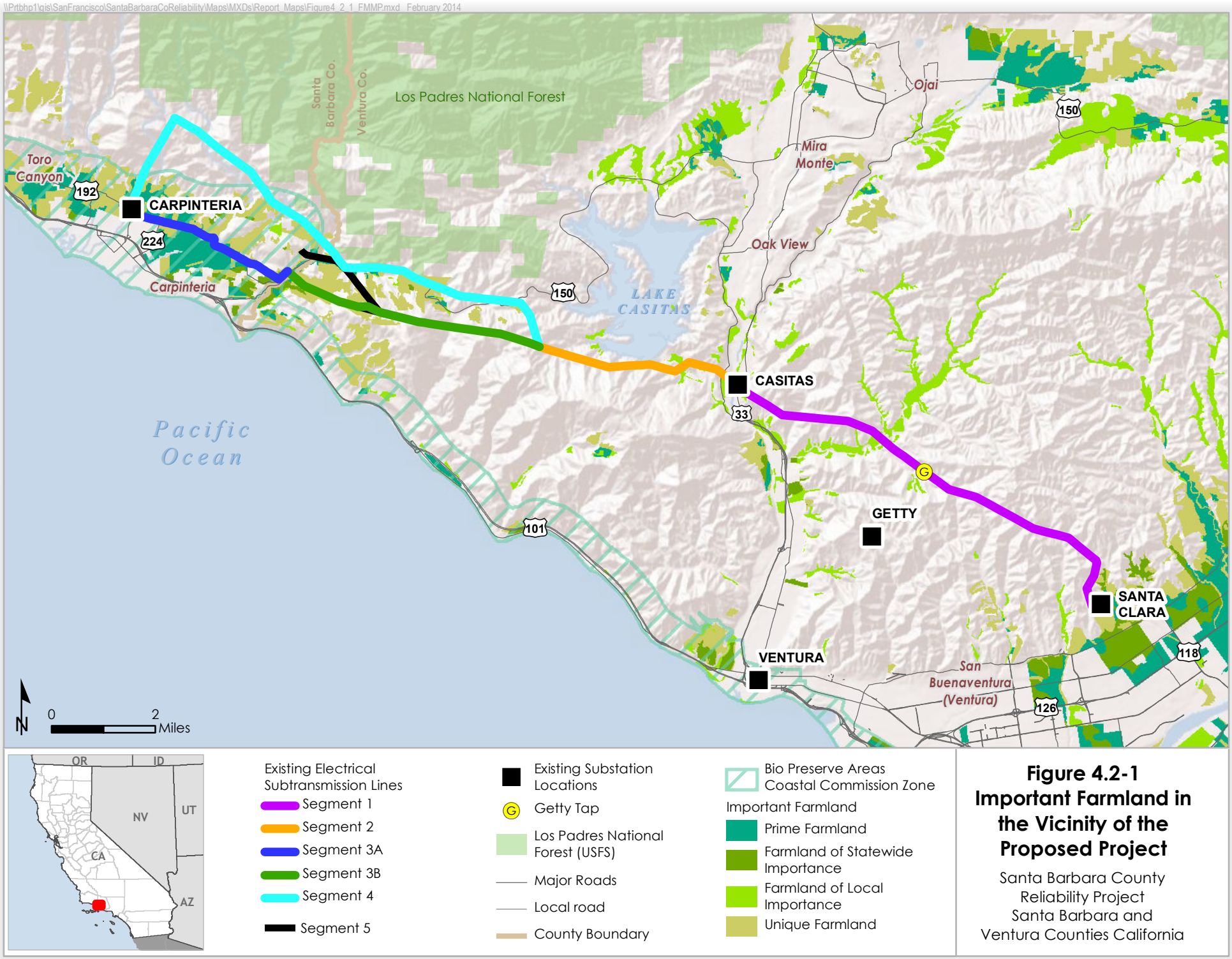

Figure 4.2-1
Important Farmland in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

4.2.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern agriculture and forestry resources in the project area.

4.2.2.1 Federal

Los Padres National Forest Land Management Plan

The Forest and Rangeland Renewable Resources Planning Act, as amended by the National Forest Management Act (NFMA), establishes a process for developing, amending, and revising land management plans (LMPs) for National Forests. In September 2005, the U.S. Forest Service (USFS) certified the Final Environmental Impact Statement, prepared in accordance with the NFMA and National Environmental Policy Act, to address revisions to the LPNF LMP. The revised LMP describes the strategic direction at the broad program-level for managing the land and its resources over the next 10 to 15 years (USFS 2013). The management of the LPNF's resources is divided into seven programs: wildlife, fish, and rare plants; vegetation; watershed, air, and geologic resources; heritage resources; specially designated areas (including wilderness); lands ownership; and managing the data of these resources. In addition, the LMP identifies allowed uses within eight land use zones. The portions of Segment 4 proposed within the LPNF would cross the Back Country (Motorized Use Restricted) land use zone.

4.2.2.2 State

California Farmland Mapping and Monitoring Program

The California Department of Conservation maintains the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of farmland to and from agricultural use. Farmlands are divided into the following categories, based on their suitability for agriculture:

- *Prime Farmland*, which has the best combination of physical and chemical characteristics for crop production. When treated and managed, its soil quality, growing season, and irrigation supply produce sustained high crop yields.
- *Farmland of Statewide Importance*, which is land, other than Prime Farmland, that has a good combination of physical and chemical characteristics (including irrigation) for crop production.
- *Unique Farmland*, which does not meet the criteria for Prime Farmland or Farmland of Statewide Importance, but has produced specific crops with high economic value.
- *Farmland of Local Importance*, which is either currently producing crops or has the capability to produce, but does not meet the criteria of the categories above.
- *Grazing Land*, which has vegetation that is suitable for grazing livestock.
- *Other Lands*, which are lands that do not meet the criteria of any of the other categories.

Additional categories used in the FMMP mapping system include "urban and built-up lands" and "lands committed to non-agricultural use." FMMP classifications are based on soil quality and irrigation status and are used as part of its neutral reporting program that classifies land based on its suitability for agriculture (CDC 2007). The classifications differ from General Plan and zoning

designations in that they are used to evaluate farmland by type and acreage, rather than to designate appropriate sites for particular land uses and regulate use and development. The proposed project would primarily cross Prime Farmland, Unique Farmland, and Grazing Land.

Williamson Act

The California Land Conservation Act of 1965, also known as the Williamson Act, is the State's principal agricultural land protection program. It enables local governments to enter into ongoing minimum-10-year contracts with private landowners to restrict specific parcels of land to agricultural or compatible uses. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual, farming, and open space uses, as opposed to potential market value. Portions of Segments 1, 3A, 3B, and 4 would cross land covered by Williamson Act Contracts within the existing SCE ROW.

Public Resource Codes Section 12220(g)

"Forest land" is 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. A portion of Segment 4 would occur within "Forest Land" maintained by the Los Padres National Forest (California State Legislature 1982a).

Public Resource Codes Section 4526

"Timberland" means land—other than land owned by the federal government and land designated by the board as experimental forest land—that is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. The proposed project would not occur within land used for "timberland" production (California State Legislature 1982b).

Government Code Section 51104(g)

A "timberland production zone" is an area that has been zoned pursuant to Section 51112 or 51113 and that is devoted to and used for growing and harvesting timber, or for growing and harvesting timber as well as compatible uses, as defined in subdivision (h). The proposed project would not occur within a "timberland production zone" (California State Legislature 1982c).

4.2.2.3 Regional and Local

Santa Barbara County Comprehensive Plan

The Santa Barbara County Comprehensive Plan, adopted by the County Board of Supervisors in 1991 and updated in May 2009, expresses the community's development goals and embodies public policy relative to the distribution of future public and private land uses. The Agricultural Element of the Comprehensive Plan serves as a guide for addressing the future use of agricultural lands and resources and includes goals and policies that encourage preservation and enhancement of agriculture within the county. In accordance with the Agricultural Element of the Comprehensive Plan, public works, public service, public utility, and oil drilling uses that are found to be compatible with agriculture may be permitted (County of Santa Barbara 2009).

Santa Barbara County Land Use and Development Code

Adopted in May 2008, the Santa Barbara County Land Use and Development Code carries out the policies of the Santa Barbara County Comprehensive Plan and Local Coastal Program by classifying and regulating the uses of land and structures within the County, consistent with the Comprehensive Plan and the Local Coastal Program (County of Santa Barbara 2008). Table 2-1, Allowed Land Uses and Permit Requirements, in the Land Use and Development Code identifies transmission as an allowed use on agricultural land.

Santa Barbara County Coastal Land Use Plan

Pursuant to Public Resources Code Section 30500 of the California Coastal Act of 1976, Santa Barbara County prepared a local coastal program for unincorporated areas of the County within the Coastal Zone.

To enforce the local coastal program, the County prepared a Land Use Plan, also referred to as the local coastal element of the County's General Plan, and a Coastal Zoning Ordinance (Santa Barbara County 2014). Combined, these implement the California Coastal Act within Santa Barbara County. Under the Santa Barbara County Coastal Land Use Plan, all electric transmission lines proposed for the Santa Barbara County Coastal Zone are subject to permitting under the terms of the California Coastal Act.

The Coastal Land Use Plan includes the following Coastal Act policies relating to agriculture and timberland:

30241. *The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses…by assuring that public service and facility expansions and non-agricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.*

30242. *All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless: 1. continued or renewed agricultural use is not feasible, or*
2. such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

30243. *The long-term productivity of soils and timberlands shall be protected and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber, processing and related facilities.*

Santa Barbara County Coastal Zoning Ordinance

The Coastal Zoning Ordinance Chapter 35.21 identifies two agricultural zones, AG-I and AG-II. AG-I is applied to areas appropriate for agricultural use within Urban, Inner Rural, Rural (Coastal Zone only), and Existing Developed Rural Neighborhood areas. The AG-II zone is applied to areas appropriate for agricultural land uses on prime and non-prime agricultural lands located within the Rural Area as shown on the Comprehensive Plan maps.

Sections 35-68 and 35-69 of the Santa Barbara County Coastal Zoning Ordinance define the purpose and intent for two agricultural districts within the coastal zone as follows:

AG-I – Agricultural I: *The purpose of the Agriculture I district is to designate and protect lands appropriate for long-term agricultural use within or adjacent to urbanized areas, and to preserve prime agricultural soils.*

AG-II – Agricultural II: *The purpose of the Agriculture II district is to establish agricultural land use for large prime and non-prime agricultural lands in the rural areas of the County (minimum 40 to 320 acre lots) and to preserve prime and non-prime soils for long-term agricultural use.*

Ventura County General Plan

Adopted by the Ventura County Board of Supervisors in 1988, and last amended in June 2001, the Ventura County General Plan sets forth the goals, policies, and programs the County will implement to manage future growth and land uses. The plan establishes multiple land use designations for agriculture, including the Coastal Agriculture and non-coastal Agricultural Exclusive and Rural Agriculture zones. The non-coastal Open Space Zone is also managed, in part, for agricultural production (Ventura County 2001). The Agricultural Exclusive Zone protects commercial agricultural lands from the encroachment of nonagricultural uses.

Policy 4.5.2 of the General Plan addresses transmission infrastructure on agricultural land, stating that "[a]ll transmission lines should be located and constructed in a manner which minimizes disruption of … agricultural activities … when not in conflict with the rules and regulations of the California Public Utilities Commission" and that "discretionary development shall be conditioned to place utility service lines underground wherever feasible."

City of Carpinteria General Plan and Local Coastal Program

The City of Carpinteria General Plan and Local Coastal Program was adopted in 2003 by the City of Carpinteria. It designates areas appropriate for continued agricultural production as AG – Agriculture. Proposed work within the city of Carpinteria would not impact land zoned as AG.

4.2.3 Impact Analysis

4.2.3.1 Methodology and Significance Criteria

Potential impacts on agriculture and forest resources were evaluated according to the following significance criteria. The significance criteria were defined based on the checklist items in Appendix G of the California Environmental Quality Act Guidelines. An impact is considered significant if the project would:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use;

b) Conflict with existing zoning for agricultural use or a Williamson Act contract;

c) 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));

d) Result in the loss of forest land or conversion of forest land to non-forest use; or

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use.

4.2.3.2 Applicant Proposed Measures

Because the Project would not result in significant impacts to agricultural and forestry resources, no Applicant Proposed Measures are proposed for this resource.

4.2.3.3 Environmental Impacts

IMPACT AG-1: Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance to Non-Agricultural Use

LESS THAN SIGNIFICANT

The proposed project would cross Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. Table 4.2-3 summarized the acreage impacts to Prime and Unique Farmland. The proposed project would not impact Farmland of Statewide Importance.

Table 4.2-3 Temporary and Permanent Impacts to Prime and Unique Farmlands in Acres

	Prime Farmland		Unique Farmland	
	Temporary	Permanent	Temporary	Permanent
Ventura County				
Segment 1	0	0	0.09	0.13
Segment 2	0	0	0	0
Segment 3B	0.06	0.09	8.0	4.57
Segment 4	0.97	0.22	6.05	4.20
Segment 5	0.65	0.16	3.11	1.08
Staging Yards (1, 2, 3, 4, 5, 6, 8, 11a-d)	0.87	0	0.04	0
Ventura County Total Impact	**2.55**	**0.47**	**17.29**	**9.98**
Santa Barbara County				
Segment 3A	4.65	0	1.99	0
Segment 4	0	0	5.20	3.11
Segment 5	0	0	0.14	0.21
Staging Yards (7, 9, 10)	2.05	0	2.87	0
Santa Barbara County Total Impact	**6.7**	**0**	**10.20**	**3.32**

Ventura County thresholds of significance for the conversion of Important Farmland to non-agricultural use is 5 acres for Prime Farmland and 10 acres for Unique Farmland. As shown in Table 4.2-3, the proposed project would convert 0.47 acres of Prime Farmland and 9.98 acres of

Unique Farmland in Ventura County. These amounts would not exceed Ventura County thresholds of significance.

The County of Santa Barbara Agricultural Threshold uses land values of physical environmental resources to determine the significance of the conversion of Important Farmland to a non-agricultural use (Santa Barbara County 2008). The land values that are considered include parcel size, soil classification, water availability, agricultural suitability, existing and historic land use, comprehensive plan designation, adjacent land uses, agricultural preserve potential, and combined farming operation. Due to the linear nature of the proposed project and the multiple landowners and properties located along the project route, the Santa Barbara County threshold methodology is not suitable for the proposed project. The proposed project would permanently convert approximately 3.3 acres of Unique Farmland, which represents 0.009 percent of the 35,606 acres of Unique Farmland identified in Santa Barbara County (CDC 2011). Therefore, the proposed project would have a less than significant impact to the conversion of Important Farmland to a non-agricultural use.

IMPACT AG-2: Conflict with existing zoning for agricultural use or a Williamson Act Contract
LESS THAN SIGNIFICANT

In both Santa Barbara and Ventura Counties, the proposed project would primarily be routed within existing ROWs across lands zoned for agricultural use and traverse land preserved under Williamson Act Contract.

Section 8105-4 of the Ventura County Non-Coastal Zoning Ordinance states that overhead transmission lines are a permitted use, subject to receipt of a "Planning Director-approved Conditional Use Permit." The California Public Utilities Commission (CPUC) has preemptive jurisdiction over the construction, maintenance, and operation of public utilities in the State of California under the CPUC General Order 131(d). In addition, the proposed project includes the reconductoring of an existing subtransmission line within an existing ROW. Therefore, a Conditional Use Permit would not be required from Ventura County prior to construction or operation of the project (CPUC 1995).

Section 35.21.030 of the Santa Barbara Land Use and Development Code defines electrical transmission lines and telecommunications facilities as an allowable use (Santa Barbara County 2008). However, a portion of the proposed project would be located within Santa Barbara County's Coastal Zone. Construction within the coastal zone is regulated by the California Coastal Commission and compliance is enforced by local municipalities. Because local coastal programs are certified by the California Coastal Commission, compliance with the Santa Barbara Coastal Land Use Plan and Coastal zoning ordinance permit would not be exempt under General Order 131(d). A Coastal Development Permit would need to be obtained prior to construction within Santa Barbara's Coastal Zone.

The Project would not cross parcels zoned as "AG – Agriculture" in the City of Carpinteria (City of Carpinteria 2003). Work conducted at the existing substations would be completed within the existing substation boundaries; therefore, these activities would not conflict with existing zoning for agricultural use within the City of Carpinteria.

Portions of Segments 1, 3A, 3B, and 4 and Staging yards 3,9,10,11a-d would be constructed on land designated as Williamson Act land. Section 2-9 of Santa Barbara County's Uniform Rules for Agricultural Preserves and Farmland Security Zones states that "[t]he erection, construction,

alteration or maintenance of gas, electric, water or communication utility facilities are compatible uses" (County of Santa Barbara 2007). The Ventura County Land Conservation Act (Williamson Act) Guidelines identify compatible uses as those that are permitted, or conditionally permitted by the Ventura County Zoning Ordinance in the AE-40 ac or CA zones." Therefore, the construction, including staging yards, and operation of a transmission line is a compatible use on Williamson Act contracted land in Ventura and Santa Barbara County.

Under this criterion, the impacts of the proposed project on the conversion of land zoned as agricultural or Williamson Act during construction and operation would be less than significant.

IMPACT AG-3: Conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland zoned Timberland Production

LESS THAN SIGNIFICANT

The proposed project includes upgrades to an existing 3,375-foot portion of Segment 4 located within the LPNF. Construction activities on USFS–administered lands include improving existing access roads; constructing new spur roads; grading pads around existing structures; installing permanent retaining walls; removing existing single-circuit, 66- kV, lattice steel structures; installing new double-circuit, 66-kV, tubular steel poles; and installing fiber optic cable atop the new poles. All work would be done within the existing 50-foot-wide SCE ROW and adjacent to existing transmission lines. However, this project would not cause this land to be rezoned as non-forest land because operations would be similar to operations of the existing line.

Therefore, the proposed project would not conflict with existing zoning for, or cause rezoning of forest land, as defined by Public Resource Codes 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). The construction and operation of the proposed project would have a less than significant impact on forest land.

The proposed project is not located on land zoned for timberland or Timberland Production; therefore, the proposed project would have no impact on timberland or timberland production zones.

IMPACT AG-4: Result in the loss of forest land or conversion of forest land to non-forest use

LESS THAN SIGNIFICANT

As described in Section 4.2.2, California Public Resources Code section 12220(g) 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." All forest lands where surface disturbances would occur have tree densities between 40 and 100 percent. Due to the abundance of forest land surrounding the proposed project, the amount of proposed disturbance would not cause tree densities to fall below 10 percent, and thus no forest lands would be reclassified as non-forest lands. Under this criterion, construction and operation of the proposed project would have a less than significant impact on the loss or conversion of forest land to non-forest use.

IMPACT AG-5: Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use or conversion of forest land to non-forest use

LESS THAN SIGNIFICANT

The rehabilitation of existing agricultural roads and access roads, and the construction of new access or spur roads, may require the temporary removal of irrigation equipment to allow construction equipment to pass. The irrigation equipment would be replaced following construction, and may be re-established temporarily during construction, if feasible. Farmland would continue to be irrigated; therefore, no temporary or long-term conversion of agricultural land would occur.

Construction vehicle traffic along private roads, agricultural roads, and access and spur roads would result in temporary increase in traffic that may result in short-term disruptions of surrounding farming and grazing activities. Although surrounding agricultural activities may be temporarily impacted, the proposed project would create an indirect impact that would result in the conversion of additional farmland to a non-agricultural use. No other activities would involve changes in the existing environment that could result in conversion of farmland to nonagricultural use or forest land to non-forest use. Construction and operation of the proposed project would have a less than significant impact under this criterion.

4.2.4 Mitigation Measures

There are no mitigation measures applicable to agriculture and forestry resources.

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4.3 Air Quality

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to air quality. Impacts that the proposed project may have on air quality are discussed in this section, as well as in Sections 4.7, "GHG Emissions," 4.8, "Hazards and Hazardous Materials," and 4.15, "Transportation/Traffic."

4.3.1 Environmental Setting

Air quality at a given location is a function of several factors, including amounts and types of pollutants emitted, both locally and regionally, and the dispersion rates of pollutants within the region. Major factors affecting pollutant dispersion include wind speed and direction, atmospheric stability, temperature, presence or absence of inversions, and topographic and geographic features of the region. The proposed project would be located in a portion of the South Central Coast Air Basin, which includes the counties of Ventura, Santa Barbara, and San Luis Obispo. The air above the proposed project area often exhibits weak vertical and horizontal dispersion patterns, which increases ambient air pollutant levels (VCAPCD 2003).

Air quality is regulated by federal, state, and local agencies (see Table 4.3-1). The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for criteria pollutants that are emitted from numerous and diverse sources. These pollutants are considered harmful to public health and the environment. The EPA has set NAAQS for seven criteria pollutants: carbon monoxide (CO), lead, nitrogen dioxide (NO_2), ozone, particulate matter less than or equal to 10 micrometers in diameter (PM_{10}), particulate matter less than or equal to 2.5 micrometers in diameter ($PM_{2.5}$), and sulfur dioxide (SO_2). Ozone is not emitted directly from emission sources, but is created in the atmosphere via a chemical reaction between oxides of nitrogen (NO_X) and reactive organic gases (ROG)[1] in the presence of sunlight. As a result, NO_X and ROGs are often referred to as ozone precursors and are regulated as a means of preventing ground-level ozone formation. In addition, the California Air Resources Board (CARB) has established the California Ambient Air Quality Standards (CAAQS) for the criteria pollutants mentioned above and other substances such as visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Table 4.3-1 Summary of National and California Ambient Air Quality Standards

Pollutant	Averaging time	CAAQS [1]	NAAQS [2]	
			Primary [3]	Secondary [3,4]
O_3	1-hour	0.09 ppm	--	Same as primary standard
	8-hour	0.07 ppm	0.075 ppm	
PM_{10} (e)	24-hour	50 µg/m³	150 µg/m³	Same as primary standard
	Annual arithmetic mean	20 µg/m³	--	

[1] In the State of California emissions of volatile organic compounds (VOCs) are commonly referred as Reactive Organic Gases (ROG). For the purposes of this report, the term ROG is used.

Table 4.3-1 Summary of National and California Ambient Air Quality Standards

Pollutant	Averaging time	CAAQS [1]	NAAQS [2]	
			Primary [3]	Secondary [3,4]
$PM_{2.5}$ [5]	24-hour	--	35 µg/m³	Same as primary standard
	Annual arithmetic mean	12 µg/m³	12 µg/m³	15 µg/m³
CO	1-hour	20 ppm	35 ppm	--
	8-hour	9 ppm	9 ppm	--
NO_2 [6]	1-hour	0.18 ppm	0.10 ppm	--
	Annual arithmetic mean	0.03 ppm	0.053 ppm	Same as primary standard
SO_2 [7]	1-hour	0.25 ppm	75 ppb	--
	3-hour	--	--	0.5 ppm
	24-hour	0.04 ppm	0.14 ppm	--
	Annual arithmetic mean	--	0.03 ppm	--
Lead [8]	30-day average	1.5 µg/m³	--	--
	Calendar Quarter	--	1.5 µg/m³ (for certain areas)(j)	Same as primary standard
	Rolling 3-month average	--	0.15 µg/m³	
Visibility-Reducing Particles[9]	8-hour	Instrumental equivalent	n/a	n/a
Sulfates	24-hour	25 µg/m³	n/a	n/a
Hydrogen Sulfide	1-hour	0.03 ppm	n/a	n/a
Vinyl Chloride[10]	24-hour	0.01 ppm	n/a	n/a

Notes:

[1] California standards for O_3, CO, SO_2, NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility-reducing particles) are values not to be exceeded.

[2] National standards (other than O_3, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year.

[3] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[4] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[5] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m³ to 12 µg/m³.

[6] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. To directly compare the national 1-hour standard to the California standards, units were converted to ppm.

[7] On June 2, 2010, a new 1-hour SO_2 standard was established.

[8] CARB identified lead and vinyl chloride as toxic air contaminants, with no threshold level of exposure for adverse health effects determined.

[9] CARB converted the general statewide visibility standard to instrumental equivalents, which is "extinction of 0.23 per kilometer."

[10] The NAAQS for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard.

Table 4.3-1 Summary of National and California Ambient Air Quality Standards

Pollutant	Averaging time	CAAQS [1]	NAAQS [2]	
			Primary [3]	Secondary [3,4]

Source: CARB 2013a

Key:

µg/m³	micrograms per cubic meter	$PM_{2.5}$	particulate matter with a diameter of 2.5 micrometers or less
CARB	California Air Resources Board	PM_{10}	particulate matter with a diameter of 10 micrometers or less
CO	carbon monoxide	ppm	parts per million
NO_2	nitrogen dioxide	SO_2	sulfur dioxide
O_3	ozone	ppb	parts per billion
n/a	not applicable		
NO_2	nitrogen dioxide		

The EPA and the CARB compare ambient air criteria pollutant measurements with NAAQS and CAAQS to assess air quality at federal and state levels. Based on these comparisons, regions are placed in one of the following categories:

- Attainment – A region is "in attainment" if monitoring shows that ambient concentrations of a specific pollutant are less than or equal to a standard. In addition, an area that has been re-designated from nonattainment to attainment is classified as a "maintenance area" for 10 years to ensure that the air quality improvements are sustained.
- Nonattainment – If the standards are exceeded for a pollutant, the region is designated as nonattainment for that pollutant.
- Unclassifiable – An area is unclassifiable if the ambient air monitoring data are incomplete and do not support a designation of attainment or nonattainment.

4.3.1.1 Local Setting

Existing sources of air pollutants in the project area (Santa Barbara County and Ventura County) include commercial and industrial area sources, non-road mobile sources (e.g., off-highway equipment), on-road mobile sources, and aircraft emissions. Table 4.3-2 summarizes the major air pollutant emission sources and levels in the proposed project area.

Table 4.3-3 presents the federal and state attainment status for each of the ambient air criteria pollutants in the proposed project area.

Santa Barbara County

As shown in Table 4.3-2, the largest contributor to locally generated air pollution in Santa Barbara County is on-road mobile sources (cars and trucks). The remainder consists of other mobile sources (planes, trains, boats, off-road equipment, farm equipment); the evaporation of solvents; combustion of fossil fuels; surface cleaning and coating; prescribed burning; and petroleum production and marketing (SBCAPCD 2010).

Santa Barbara County's air quality has historically violated both the state and federal ozone standards. Ozone concentrations above these standards adversely affect public health, diminish the production and quality of many agricultural crops, reduce visibility, and damage native and ornamental vegetation. Table 4.3-4 shows the reported days on which both national and state standards were exceeded in Santa Barbara County during the year 2012.

Table 4.3-2 Estimated Annual Average Emissions in the Proposed Project Area (Year 2010)

Emission Sources	Air Pollutant Emissions (tons per day)					
	ROG	CO	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Santa Barbara County						
Stationary Sources	9.9	7.0	7.3	4.4	1.0	0.5
Area-wide Sources	10.6	32.0	2.1	< 0.1	21.0	7.3
Mobile Sources	16.5	125.9	82.2	32.1	6.0	5.6
Total Emissions Santa Barbara County	**37.0**	**164.9**	**91.6**	**36.5**	**27.9**	**13.4**
Ventura County						
Stationary Sources	11.5	9.4	4.7	0.6	1.3	0.9
Area-wide Sources	12.9	22.2	1.7	0.1	22.2	5.4
Mobile Sources	22.7	163.3	56.8	12.4	4.1	3.6
Total Emissions Ventura County	**47.2**	**194.9**	**63.2**	**13.1**	**27.7**	**9.9**

Source: CARB 2013b.
Notes:
[1] Stationary sources include: fuel combustion, waste disposal, cleaning and surface coatings, petroleum production and marketing, and industrial processes.
[2] Area-wide sources include: solvent evaporation and miscellaneous processes.
[3] Mobile sources include: On-road motor vehicles and other mobile sources.
Key:
CO carbon monoxide
NO_X oxides of nitrogen
PM_{10} particulate matter with a diameter of 10 micrometers or less
$PM_{2.5}$ particulate matter with a diameter of 2.5 micrometers or less
ROG reactive organic gases
SO_X oxides of sulfur

Table 4.3-3 Area Designations within the Proposed Project Area

Pollutant	Ventura County		Santa Barbara County	
	NAAQS	CAAQS	NAAQS	CAAQS
Ozone	NA	NA	A/U	NA
PM_{10}	U	NA	U	NA
$PM_{2.5}$	U	A	U	U
CO	A/U	A	A/U	A
NO_2	A/U	A	A/U	A
SO_2	A	A	U	A
Lead	A/U	A	A/U	A
Hydrogen Sulfide	--	A	--	U
Sulfates	--	A	--	A
Visibility-Reducing Particles	--	U	--	U

Sources: CARB 2013b
Key:
A attainment
A/U attainment/unclassifiable
CO carbon monoxide
NA nonattainment
NO_2 nitrogen dioxide
$PM_{2.5}$ particulate matter with a diameter of 2.5 micrometers or less
PM_{10} particulate matter with a diameter of 10 micrometers or less
SO_2 sulfur dioxide
U unclassifiable

Table 4.3-4 Reported Exceedances of NAAQS and CAAQS in the Project Area (Year 2012)

Monitoring Location	Criteria Air Pollutant – Days exceeding standard[1]					
	Ozone			PM_{10} [2]		$PM_{2.5}$
	1-hour CAAQS	8-hour NAAQS	8-hour CAAQS	24-hour NAAQS	24-hour CAAQS	24-hour NAAQS
Santa Barbara County						
Carpinteria	0	0	1	(*)	(*)	(*)
El Capitan Beach	0	0	0	0	0	(*)
Gaviota	0	0	0	(*)	(*)	(*)
Goleta-Fairview	0	0	0	0	0	(*)
Las Flores Canyon	0	2	4	0	0	(*)
Lompoc (station #1)	0	0	0	(*)	(*)	(*)
Lompoc (station #2)	0	0	0	(*)	3	(*)
Los Padres National Forest	0	0	2	(*)	(*)	(*)
Santa Barbara	0	0	0	(*)	(*)	0
Santa Maria	0	0	0	(*)	11	0
Santa Ynez	0	0	0	(*)	(*)	(*)
Vandenberg Air Force Base	0	0	0	0	0	(*)
Ventura County						
El Rio	0	0	0	0	6	0
Ojai	2	9	24	(*)	(*)	(*)
Piru	0	1	14	0	(*)	(*)
Simi Valley	3	14	24	0	0	0
Thousand Oaks	0	0	2	(*)	(*)	1

Source: CARB 2013c

Notes:

[1] Days reported by CARB as fractional values were rounded up to the nearest whole number.

[2] PM_{10} statistics may include data that are related to an exceptional event.

* There was insufficient (or no) data available to determine the value.

Key:

CAAQS California Ambient Air Quality Standards

NAAQS National Ambient Air Quality Standards

$PM_{2.5}$ particulate matter with a diameter of 2.5 micrometers or less

PM_{10} particulate matter with a diameter of 10 micrometers or less

On August 8, 2003, Santa Barbara County officially became an attainment area for the federal 1-hour ozone standard. On June 15, 2004, the EPA replaced the federal 1-hour ozone standard with an 8-hour ozone standard for Santa Barbara County and most parts of the country. Santa Barbara County was designated in attainment with the federal 8-hour ozone standard, and the 2007 Clean Air Plan provided for maintenance of this standard; however, as shown in Table 4.3-3, the county remains in non-attainment for ozone for the state-level CAAQS.

The Santa Barbara County Air Pollution Control District (SBCAPCD) is the air pollution control agency for Santa Barbara County.

Ventura County

In Ventura County, ozone generally reaches peak levels by mid-afternoon and, along with ozone precursors, is often blown inland by the prevailing winds. Thus, inland areas such as Simi Valley, Thousand Oaks, Ojai, Fillmore, and Piru often have higher ozone levels and a greater number of

days exceeding the federal and state ozone standards than the county's coastal areas. The smoggiest days tend to occur from May through October, when high temperatures and stable atmospheric conditions produce conditions conducive to ozone formation and accumulation (VCAPCD 2008).

Ventura County is a nonattainment area for the federal 8-hour ozone standard, as well as for the California 1-hour and 8-hour ozone standards. The Ventura County 8-hour ozone nonattainment area includes all of mainland Ventura County (including ocean areas out to 3 miles from the mainland shore) but excludes Anacapa and San Nicolas Islands (VCAPCD 2008). Air quality in Ventura County has improved dramatically since 1990, despite the increase in population. In 1990, there were 70 violations countywide of the federal 8-hour ozone standard, but only 11 in 2005, 17 in 2006, and 6 in 2007 (VCAPCD 2008). Table 4.3-4 shows the reported days on which both national and state standards were exceeded in Ventura County during the year 2012.

The Ventura County Air Pollution Control District (VCAPCD) is the air pollution control agency for Ventura County.

4.3.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern air quality in the project area.

4.3.2.1 Federal

Federal Clean Air Act

The Clean Air Act of 1970 (CAA) (42 United States Code §§7401-7641) (last amended in 1990 [104 Stat. 2468, P.L. 101-549]), defines the EPA's role in managing air quality in the United States. Under the CAA, the EPA promulgated the NAAQS (40 Code of Federal Regulations Part 50), setting limits on the acceptable ambient concentrations for each of the federally identified criteria air pollutants.

Similar to the CAA, the California Clean Air Act of 1988 (CCAA) (Stats. 1988, Ch. 1568) requires all air quality planning regions to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest date practicable. The CCAA also requires that air quality regions that have failed to meet the CAAQS work with the California Air Resources Board (CARB) to prepare State Implementation Plans demonstrating when and how the CAAQS will be met.

4.3.2.2 State

California Clean Air Act

CARB, a part of the California Environmental Protection Agency, is responsible for interpreting and implementing state statutes that manage air pollution. CARB gathers air quality data for the State of California, ensures the quality of the data, designs and implements air models, sets ambient air quality standards for the state, compiles the state's emissions inventories, and performs air quality and emissions inventory special studies. CARB is responsible for monitoring the regulatory activity of California's 35 local and regional air pollution control districts. These districts regulate stationary emissions sources (i.e., industrial pollution sources), issue air quality permits, develop local air quality plans, and ensure that industries under their jurisdiction adhere to air quality mandates.

4.3.2.3 Local

Santa Barbara County Air Pollution Control District 2010 Clean Air Plan

The Santa Barbara County Air Pollution Control District's (SBCAPCD) 2010 Clean Air Plan, adopted by the County in January 2011, presents the County's goals and a cost-effective emissions control strategy for attaining the state 8-hour ozone standard, based on countywide air quality baseline conditions and future growth projections. This plan satisfies the triennial update in compliance with the requirements of the California Clean Air Act, to attain the state standard (Health and Safety Code, sections 40924 and 40925). The plan does not address any specific federal planning requirements because Santa Barbara was designated as a maintenance area for the federal 8-hour ozone standard (SBCAPCD 2010).

The 2010 Clean Air Plan provides air quality information, a baseline emissions inventory, future year emissions estimates for 2020 and 2030, strategies for reducing emissions from transportation and land use sources, and proposed rules to be enforced by the APCD to attain the proposed emission reduction goals. More specifically, the emission reduction measures presented in this plan include controls on all inventory categories contributing ROG and NO_X emissions: industrial processes, combustion sources, petroleum handling, solvent use, consumer products, waste burning, and mobile sources (SBCAPCD 2010).

The County anticipates that onshore emissions of ROGs and NO_X will continue to decrease through 2030, due primarily to on-road mobile source emission reduction measures. In addition, the County expects a slight decrease in NO_X and a slight increase in ROG emissions due to marine shipping activities in the area (SBCAPCD 2010).

SBCAPCD Rule 345: Control of Fugitive Dust from Construction and Demolition Activities

This rule applies to activities associated with construction or demolition of structures, including requirements and standards for visible fugitive dust emissions beyond the property line, truck hauling, and demolition. Under this rule, any construction, earth-moving, or demolition activities shall not discharge visible dust emissions beyond the property line of 20 percent opacity or greater for periods aggregating more than 3 minutes in any 60 minute period.

Moreover, this rule also establishes the following standards applicable to the proposed project:

- For truck hauling, at least one of the following dust prevention techniques shall be utilized:
  - *Use properly secured tarps or cargo covering that covers the entire surface area of load or use a container-type enclosure.*
  - *Maintain a minimum of 6 inches of freeboard below the rim of the truck bed where the load touches the sides of the cargo area and ensure that peak of the load does not extend above any part of the upper edge of the cargo area.*
  - *Water or otherwise treat the bulk material to minimize loss of material to wind or spillage.*
  - *Other effective dust prevention control measures approved in writing by the Control Officer.*

- For vehicle track-out/carry-out, spillage from transport trucks and erosion shall be controlled by implementing these measures:
  - *Visible roadway dust shall be minimized by the use of any of the following track-out/carry-out and erosion control measures: track-out grates or gravel beds at each egress point, wheel-washing at each egress point during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and*
  - *Visible roadway dust shall be removed at the conclusion of each work day when bulk material removal ceases, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only a PM_{10}-Efficient Street Sweeper shall be used. The use of blowers for removal of track-out/carry-out is prohibited.*
- For demolition (applicable to foundations/structure removal) the following work practice standards shall be followed:
  - *As necessary to prevent visible emissions, the structure shall be wet (with sufficient quantities of water to prevent the generation of visible dust plumes) prior to removal. Wetting shall continue as necessary during active removal and the debris reduction process* (SBAPCD 2009).

Santa Barbara County Comprehensive Plan – Land Use Element and Air Quality Supplement

The Land Use Element of the Santa Barbara County Comprehensive Plan provides policy recommendations integrating air quality planning techniques into the County's land use planning program. The Land Use Measures presented in this plan are primarily focused on actions to reduce automobile use and hence vehicular miles traveled from land use development within the County's jurisdiction, contributing to a reduction in hydrocarbon, NO_X, and CO emissions. Implementation of land use measures that result in reductions in automobile use can aid in the long-term maintenance of good air quality once the federal air quality standards have been attained in Santa Barbara County. Although most of the measures identified in this Land Use Element are not fully applicable to the proposed project, this document identifies the use of transportation modes such as carpools or vanpools as an option available for commuters when jobs are located long distances from housing (County of Santa Barbara 2009).

Santa Barbara County Environmental Thresholds and Guidelines Manual

Published in 2008, the Santa Barbara County Environmental Thresholds and Guidelines Manual provides guidance to local and state agencies to determine whether a discretionary permit will individually or cumulatively have a significant impact on air quality (SBCAPCD 2008). Quantitative emission thresholds for long-term/operational emissions are provided in these guidelines and further discussed in Section 4.3.3.1. In addition, the SBCAPCD has published complementary guidelines for assessing and mitigating air quality impacts of development projects within the county jurisdiction, such as the *Scope and Content of Air Quality Sections in Environmental Documents* (SBCAPCD 2011). These guidelines, published by both the County Planning Department and the APCD, have been considered in the development of the air quality analysis presented in this section.

Ventura County 2007 Air Quality Management Plan

Pursuant to the federal CAA Amendments of 1990, the Ventura County 2007 Air Quality Management Plan (AQMP) presents Ventura County's: 1) strategy to attain the federal 8-hour ozone standard; 2) attainment demonstration for the federal 8-hour ozone standard; 3) reasonable

further progress demonstration for the federal 8-hour ozone standard; and 4) transportation conformity emissions budget for federal transportation conformity purposes. The 2007 AQMP also presents the 2003–2005 Triennial Assessment and Plan Update required by the CCAA (VCAPCD 2008).

The 2007 AQMP provides practical control measures proposed as revisions to existing Ventura County Air Pollution Control District (VCAPCD) rules. Most of the emission reductions that Ventura County needs to attain the federal 8-hour ozone standard, and continue progress towards meeting the state ozone standards, are considered as part of CARB's 2007 State Implementation Plan. This plan is a comprehensive and far-reaching set of emission reduction programs that focus on mobile sources, consumer products, and pesticides to significantly improve air quality throughout California and meet federal clean air standards for ozone and $PM_{2.5}$ (VCAPCD 2008).

VCAPCD Rule 55 – Fugitive Dust

As part of the VCAPCD general and source-specific regulations, Rule 55 establishes the provisions for any operation, disturbed surface area, or human-created condition capable of generating fugitive dust, including activities applicable to the proposed project, such as bulk material handling, earth moving, construction, structure removal, usage of storage piles, unpaved roads, and track-out operations.

Rule 55 requires that emissions from any applicable source shall not remain visible beyond the midpoint of a public street or road adjacent to the property line of the emission source, or beyond 50 feet from the property line when no roads are adjacent. This rule also establishes an opacity limit of 20 percent from any applicable fugitive dust source, during observation periods of 3 minutes or more. More specifically, this rule requires implementation of dust prevention and control measures that are applicable to the proposed project, such as those summarized in Table 4.3-5. The proposed project would only be exempted from these requirements in case of emergency repairs and during public agency inspection of infrastructure.

Another related regulation applicable to the proposed project is Rule 55.1, which establishes provisions for operating construction or earth-moving equipment that may cause fugitive dust emissions on public unpaved roads within the VCAPCD jurisdiction. Visible roadway accumulations that occur on roads with fewer than 1,000 average daily trips (such as the access and spur roads associated with the proposed project) are exempted from the VCAPCD material removal requirements. However, this rule also includes requirements for construction and earth-moving activities on unpaved roads, such as limits to visible emissions of 20 percent opacity or greater during observations over a period of 3 minutes or more in any single hour, or a visible dust plume that exceeds 100 feet in length.

Table 4.3-5 Ventura County Fugitive Dust Control Requirements Applicable to the Proposed Project

Applicable Fugitive Dust Source	Ventura County APCD Rule 55 Requirements
Track-Out	Track-out 25 feet or more in length is prohibited unless at least one of the following control measures is utilized: • **Track-Out Area Improvement:** Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with public paved surface, and extend for a centerline distance of at least 100 feet with an acceptable width to accommodate traffic ingress and egress from the site. • **Track-Out Prevention:** Check and clean the undercarriage and wheels on all vehicles before leaving unpaved surface or install a properly functioning and well-maintained track-out control device(s) that prevents track-out soil onto paved public roads. • **Track-Out Removal:** Remove track-out from pavement as soon as possible but not later than one hour after it has been deposited on the paved road. If a street sweeper is used to remove any track-out, only PM_{10}-efficient street sweepers certified to meet South Coast AQMD Rule 1186 requirements shall be used. • All track-out shall be removed at the conclusion of each workday or evening shift subject to the same condition regarding PM_{10} efficient street sweepers. • The use of blowers for removal of track-out is prohibited.
Earth Moving	No person shall engage in earth-moving activities in a manner that creates visible dust emissions over 100 feet in length.
Bulk Material Handling Facilities	Active operation with a monthly import or export of 2,150 cubic yards or more of bulk material requires implementation of at least one of the following measures at each vehicle egress from the site to a public paved road: • Install a pad consisting of washed gravel (minimum size: 1 inch) maintained in a clean condition to a depth of at least 6 inches and extending at least 30 feet wide and 50 feet long. • Pave the surface at least 100 feet long and at least 20 feet wide. • Utilize a wheel shaker/wheel spreading device, also known as rumble grate, consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and sufficient width to allow all wheels of vehicle traffic to travel over grate to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. • Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. • Any other control measure or device that prevents track-out onto public paved roads.
Truck Hauling	Loading of bulk materials or soil onto outbound trucks is subject to implementation of at least one of the following dust prevention techniques: • Use properly secured tarps or cargo covers over the entire surface area of the load, or use a container-type enclosure. • Maintain a minimum of 6 inches of freeboard below the rim of the truck bed where the load touches the sides of the cargo area and insure that the peak of the load does not extend above any part of the upper edge of the cargo area. • Water or otherwise treat the bulk material to minimize loss of material to wind or spillage. • Other effective dust control measures.

Source: VCAPCD 2008

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Ventura County General Plan

The air quality goals, policies, and programs of the Ventura County General Plan (County of Ventura 2011) that apply to the proposed project are as follows:

Goals

- Diligently seek and promote a level of air quality that protects public health, safety, and welfare, and seek to attain and maintain the state and federal Ambient Air Quality Standards.
- Ensure that any adverse air quality impacts, both long-term and short-term, resulting from discretionary development[2] are mitigated to the extent feasible.

Policies

- Discretionary development that is inconsistent with the 2007 AQMP shall be prohibited, unless overriding considerations are cited by the decision-making body.
- The air quality impacts of discretionary development shall be evaluated by use of the Guidelines for the Preparation of Air Quality Impact Analysis.
- Discretionary development that would have a significant adverse air quality impact shall only be approved if it is conditioned with all reasonable mitigation measures to avoid, minimize, or compensate (offset) for the air quality impact. Developers shall be encouraged to employ innovative methods and technologies to minimize air pollution impacts.
- Where deemed necessary by the APCD, discretionary development shall be conditioned to develop, implement, and maintain over time, Transportation Demand Management programs consistent with the APCD's trip reduction rule 210. These programs shall include a requirement for annual performance reporting to and approval by the APCD.
- Development subject to APCD permit authority shall comply with all applicable APCD rules and permit requirements, including the use of best available control technology, as determined by the APCD.

Programs

- The VCAPCD will require employers subject to the VCAPCD's Trip Reduction Rule 210 to prepare and implement trip reduction plans. The purpose of these plans is to reduce the number of solo drivers commuting to work. Trip reduction strategies may include, but are not limited to, ridesharing promotion, modified work schedules, preferential parking, telecommuting, parking management, and van pools. The VCAPCD will continue to be involved with the annual review of the Congestion Management Program and has state-mandated responsibility regarding review of deficiency plans.

[2] The Ventura County General Plan defines discretionary development as "any development proposal, project or permit which requires the exercise of judgment, deliberation, or decision on the part of the decision-making authority in the process of approving or disapproving a particular activity, as distinguished from situations where the decision-making authority merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations."

Ventura County Air Quality Assessment Guidelines

The Ventura County Air Quality Assessment Guidelines (VCAPD 2003) recommend specific criteria and threshold levels for determining whether a proposed project may have a significant adverse air quality impact. These guidelines also provide mitigation measures that may be useful for mitigating the air quality impacts of proposed projects. Use of these guidelines is not required or mandated by the VCAPCD. The final decision regarding whether to use these guidelines rests with the lead agency responsible for approving the project. A discussion of applicable guidelines considered for the analysis of the proposed project in Ventura County is provided in Section 4.3.3.1.

City of Carpinteria Engineering Permit - Fugitive Dust Requirements

The City of Carpinteria Public Works Department requires for any engineering permit that city streets and public right-of-way will be kept clean and clear of construction materials and debris 24 hours a day, seven days a week. Dust control shall be implemented in accordance with the SBCAPCD rules and regulations.

City of Carpinteria Resolution No. 408 - Environmental Review Guidelines

The purpose of Resolution No. 408, Environmental Review Guidelines is to provide the City of Carpinteria, applicants, and the public with definitions, procedures, and forms to be used in the implementation of the California Environmental Quality Act (CEQA; Public Resources Code Section 21000 and following) and to supplement the State CEQA Guidelines. For assessing impacts associated with air quality, the City recommends the use of quantitative thresholds or numerical values reflecting degrees of environmental change that are deemed insignificant by federal or state standards, comprehensive plan elements, or scientific data. These thresholds are further discussed in Section 4.3.3.1.

4.3.3 Impact Analysis

4.3.3.1 Methodology and Significance Criteria

Methodology

The applicant estimated expected emissions of criteria pollutants from construction and operation of the proposed project based on the proposed list of equipment and vehicles; estimated construction schedule and phasing; anticipated worker, vendor, and heavy duty vehicle use and miles traveled; and projected ground disturbance using the California Emission Estimator Model (CalEEMod). SBCAPCD and VCAPCD have not established significance thresholds for construction emissions. The South Coast Air Quality Management District is an adjacent air district to the proposed project with well-defined construction emission thresholds. Therefore, the CPUC has opted to compare the estimated construction emissions to SCAQMD's significance threshold for construction.

Significance Criteria

The significance criteria were defined based on the checklist items in Appendix G of the CEQA Guidelines. An impact is considered significant if the project would:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

Santa Barbara County Significance Criteria

Short-term Construction Emissions

Although quantitative thresholds of significance are not currently in place for short-term emissions, the SBCAPCD requires the disclosure of potential short-term impacts, such as exhaust emissions from construction equipment and fugitive dust generation during grading. In the interest of public disclosure, the SBCAPCD recommends that construction-related NO_X, ROG, PM_{10}, and $PM_{2.5}$ emissions, from diesel- and gasoline-powered equipment, paving, and other activities, be quantified.

The SBCAPCD requires implementation of standard dust control measures for any discretionary project involving earth-moving activities. Because Santa Barbara County violates the state standard for PM_{10}, dust mitigation measures are required for all discretionary construction activities regardless of the significance of the fugitive dust impacts, based on the policies in the 2010 Clean Air Plan (SBCAPCD 2011).

The SBCAPCD has not established short-term thresholds for emissions of NO_X and ROG from construction equipment. According to the Santa Barbara County Environmental Thresholds and Guidance Manual, these thresholds have not been established since construction emissions comprise approximately six percent of the 1990 county-wide emission inventory for NO_X, which is considered insignificant (County of Santa Barbara 2008). The 2008 Santa Barbara County Planning Emission Inventory indicates that emissions from off-road equipment represent approximately five percent of the total 2008 county-wide emission inventory for NO_X (SBCAPCD 2013).

Long-term Operational Emissions

Long-term air quality impacts occur during project operation and include emissions from any equipment or process used in a project and motor vehicle emissions associated with a project. These emissions must be summed in order to determine the significance of a project's long-term impact on air quality.

Ozone Precursors (oxides of nitrogen and reactive organic compounds). The proposed project will not have a significant air quality effect on the environment, if operation of the project will:

- Emit (from all project sources,[3] mobile and stationary), less than the daily trigger for offsets in the APCD New Source Review Rule, for any pollutant; and
- Emit less than 25 pounds per day (lbs/day) of NO_X or reactive organic compounds (ROCs) from motor vehicle trips only; and for offsets set in the APCD New Source Review Rule, for any pollutant; and
- Not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone); and
- Not exceed the APCD health risk public notification thresholds adopted by the SBAPCD Board; and
- Be consistent with the adopted federal and state Air Quality Plans.

Carbon Monoxide. A project will have a significant air quality impact if it causes, by adding to the existing background CO levels, a CO "hot spot" where the California 1-hour standard of 20 parts per million of CO is exceeded. This typically occurs at severely congested intersections. Long-term project emissions primarily stem from motor vehicles associated with the land use project and stationary sources, which may require permits from the APCD.

Project Screening for Carbon Monoxide Impacts:

1) If a project contributes fewer than 800 peak hour trips, then CO modeling is not required.
2) Projects that will contribute more than 800 peak hour trips to an existing congested intersection at Level of Service D or below, or will cause an intersection to reach Level of Service D or below, may be required to model for CO impacts. However, projects that will incorporate intersection modifications to ease traffic congestion are not required to perform modeling to determine potential CO impacts.

Ventura County Air Quality Significance Criteria

VCAPCD recommends the following significance criteria for determining whether an Environmental Impact Report or a Mitigated Negative Declaration should be prepared to address potential adverse air quality impacts from a project, especially potential impacts on nearby populations (e.g., schools, day care centers, residences, and hospitals). Relevant factors under consideration include proximity of the project to populated areas; proximity of the proposed project to other pollutant sources (e.g., industrial facilities emitting odorous or hazardous substances); and projects with potential land use conflicts.

Ozone (based on emission levels of reactive organic compounds and oxides of nitrogen). The following are the ROG and NO_X thresholds that the Ventura County Air Pollution Control Board has determined will individually and cumulatively jeopardize attainment of the federal 1-hour ozone standard, and thus have a significant adverse impact on air quality in Ventura County.

(a) Ojai Planning Area
ROGs: 5 lbs/day
NO_X: 5 lbs/day

[3] Portable equipment registered under the CARB Statewide Portable Equipment Registration Program (PERP) shall not be included a proposed project's emission total. Emissions from these sources are in compliance with the CARB PERP program and are exempt from APCD permits.

(b) Remainder of Ventura County
ROGs: 25 lbs/day
NO_X: 25 lbs/day

Chapter 5 of the Ventura County Air Quality Assessment Guidelines [4] establish that construction-related emissions (including portable engines and portable engine-driven equipment used for construction or repair and maintenance activities) of ROG and NO_X are not counted to the significance thresholds mentioned above, since these emissions are temporary (VCAPCD 2003). However, the guidelines also state that construction-related emissions should be mitigated if estimates of ROG and NO_X from heavy-duty construction equipment anticipated to be used for a particular project exceed the VCAPCD significance criteria. Table 4.3-6 summarizes the VCAPCD Construction Mitigation Measures.

Ozone – Cumulative Impacts Based on Project-Specific AQMP Consistency. Inconsistent projects are usually those that cause the existing population to exceed the population forecasts contained in the most recently adopted AQMP. A project with estimated emissions of 2 lbs/day or greater of ROG or 2 lbs/day or greater of NO_X is considered to have a significant cumulative adverse air quality impact if it is also found to be inconsistent with the AQMP.

Fugitive Dust. A project that may be reasonably expected to generate fugitive dust emissions in such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that may endanger the comfort, repose, health, or safety of any such person or the public, or that may cause, or have a natural tendency to cause, injury or damage to business or property will have a significant adverse air quality impact. In addition, the VCAPCD considers that a project for which an appropriate air dispersion modeling analysis shows a possible violation of an ambient particulate standard will also have a significant adverse air quality impact. Table 4.3-6 summarizes the VCAPCD mitigation measures to reduce construction fugitive dust emissions presented in the Ventura County Air Quality Assessment Guidelines.

Toxic Air Contaminants. Impacts from toxic air contaminants may be estimated by conducting a health risk assessment (HRA). The HRA procedure involves the use of an air quality model and a protocol approved by the APCD. The recommended significance thresholds are:

(a) Lifetime probability of contracting cancer is greater than 10 in one million (as identified in an HRA).

(b) Ground-level concentrations of non-carcinogenic toxic air pollutants would result in a Hazard Index of greater than 1 (as identified in an HRA).

Odors. A qualitative assessment indicating that a project may reasonably be expected to generate odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that may endanger the comfort, repose, health, or safety of any such person or the public, or that may cause, or have a natural tendency to cause,

[4] The Ventura County Air Quality Assessment Guidelines is an advisory document prepared by the District that provides lead agencies, consultants, and project applicants with a framework and uniform methods for preparing air quality impact assessments and the air quality section of environmental documents for projects that require discretionary entitlements. Pursuant to CEQA, the Guidelines recommend specific criteria and threshold levels for determining whether a proposed project may have a significant adverse air quality impact.

injury or damage to business or property (see California Health and Safety Code, Division 26, §41700) will have a significant adverse air quality impact.

Table 4.3-6 Ventura County APCD Construction Mitigation Measures

Pollutant	VCAPCD Mitigation Measures
ROG and NO_X	1. Minimize equipment idling time. 2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications. 3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time. 4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.
Fugitive Dust	1. The area disturbed by clearing, grading, earth moving, or excavation shall be minimized to prevent excessive amounts of dust. 2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. 3. Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities: a) All trucks shall be required to cover their loads as required by California Vehicle Code § 23114. b) All graded and excavated material, exposed soil areas, and active portions of the construction site, included unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll compaction, as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. 4. Graded and/or excavated inactive areas of construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust. 5. Signs shall be posted on-site limiting traffic to 15 miles per hour or less. 6. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earthmoving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive. 7. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads. 8. Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

Source: VCAPCD 2003

South Coast Air Quality Management District Construction Significance Criteria

Considering that the proposed project components would be constructed within both SBCAPCD and VCAPCD limits, and in the absence of quantitative thresholds of significance for short-term construction emissions in these jurisdictions, the CPUC has opted to use the South Coast Air Quality Management District (SCAQMD) Air Quality Significance Thresholds for Construction for the purpose of this EIR analysis. Table 4.3-7 shows the threshold of significance for each criteria pollutant.

Table 4.3-7 SCAQMD Air Quality Thresholds of Significance for Construction

Pollutant	Construction Threshold
NO_X	100 lbs/day
VOC	75 lbs/day
PM_{10}	150 lbs/day
$PM_{2.5}$	55 lbs/day
SO_X	150 lbs/day
CO	550 lbs/day
Lead	3 lbs/day

Source: SCAQMD 2014
Key:
lbs/day = pounds per day
CO carbon monoxide
NO_X oxides of nitrogen
PM_{10} particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$ particulate matter less than or equal to 2.5 micrometers in diameter
SO_X sulfur dioxide
VOC volatile organic compound

4.3.3.2 Applicant Proposed Measures

As part of the proposed project design, the applicant would control fugitive dust emissions by implementing control measures set forth by VCAPCD Rule 55 and SBCAPCD Rule 345.

Additionally, the applicant has committed to the following applicant proposed measures (APMs) as part of the design of the proposed project:

APM AQ-1: The following control measures stated in the VCAPCD Ventura County Air Quality Assessment Guidelines to minimize the generation of fugitive dust (PM_{10} and $PM_{2.5}$) would be implemented during construction of the proposed project, as feasible:

- The area disturbed by clearing, grading, earth-moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
- Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
- Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:
  a) All trucks shall be required to cover their loads as required by California Vehicle Code §23114.

b) All graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll-compaction as appropriate. Watering shall be done as often as necessary, and reclaimed water shall be used whenever possible.

- Graded and/or excavated inactive areas of the construction site shall be monitored by the applicant at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for more than four days. If no further grading or excavation operations are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.
- Signs shall be posted on site limiting traffic to 15 miles per hour or less.
- During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earth-moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off site or on site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD to determine when winds are excessive.
- Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.
- Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

APM AQ-2: The following control measures stated in the VCAPCD Ventura County Air Quality Assessment Guidelines would be implemented during construction of the Project as feasible:

- Minimize equipment idling time.
- Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications.
- Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.
- Use alternatively fueled construction equipment, such as compressed natural gas, liquefied natural gas, or electric, if feasible.

4.3.3.3 Environmental Impacts

Overview of Construction Impacts

Construction activities include surveying, roads and landing work, grading, civil work, electrical work, and restoration work. Construction work associated with the proposed 66-kV subtransmission and telecommunication lines would occur at different locations throughout the length of the proposed linear routes (Segments 1, 2, 3A, 3B, and 4). Thus, construction equipment would be used throughout a relatively large geographical area (approximately 32 miles). In

addition, short-term construction activities would also occur at the Santa Clara, Casitas, and Carpinteria Substations. The applicant estimates that construction of the proposed project would take approximately 24 months.

Criteria air pollutants would be emitted from the engine exhaust of diesel- and gasoline-fueled on-site construction equipment and on-road vehicles (i.e., delivery trucks and crew vehicles). On-site earth-moving activities (e.g., trenching) and vehicle travel on access roads would also generate fugitive dust. Heavy-duty diesel- and gasoline-powered equipment and vehicles at the work sites would include loaders, graders, backhoes, cranes, and trucks. Worker vehicles would include those used by the construction crews to commute to and from proposed project work and staging areas.

Estimates of maximum daily criteria air pollutant emissions that would result from project construction are summarized in Table 4.3-8. Estimated maximum daily emissions are intended to represent peak values based on the combination of overlapping construction activities that yield the highest emissions. The project estimated daily construction emissions are based on conservative assumptions about daily equipment and vehicle use and overlapping construction activities. Air pollutant emissions in year 2015 would be higher than year 2016, as all roadwork, retaining wall installation, and the majority of the 66-kV subtransmission line construction would occur during this year. Construction crews would be working in parallel, which results in higher maximum daily emissions. Additionally, Table 4.3-9 presents total annual emissions estimated for years 2015 and 2016. Detailed calculations and assumptions for all construction activities and operational sources are presented in Appendix C.

Table 4.3-8 Estimated Maximum Daily Construction Emissions

Year	Project Component[1]	Daily Emissions (lbs/day)[2]			
		ROG	NO_X	PM_{10}	$PM_{2.5}$
2015	66-kV Subtransmission Lines	94.25	849.94	275.30	59.18
	Substation work	3.93	44.25	25.13	4.22
	2015 Daily Emissions	**98.18**	**894.19**	**300.44**	**63.40**
2016	66-kV Subtransmission Lines	3.75	41.56	22.32	3.74
	Substation work	0.44	4.40	4.63	0.63
	2016 Daily Emissions	**4.18**	**45.96**	**26.95**	**4.37**

Source: SCE 2014

Note:

[1] Additional activities proposed for constructing the 66-kV subtransmission lines in 2014 include retaining wall installation (30 units), removal of structures at discrete locations in Segment 4, as well as the installation of J-towers instead of TSPs at four selected locations along Segment 4.

[2] Correspond to CalEEMod outputs based on applicant's proposed equipment, phasing and mitigation measures (APM AQ-1 and APM AQ-2).

Key:

kV	kilovolts	PM_{10}	particulate matter less than or equal to 10 micrometers in diameter
NO_X	oxides of nitrogen	$PM_{2.5}$	particulate matter less than or equal to 2.5 micrometers in diameter
ROG	reactive organic gases	CalEEMod	California Emission Estimator Model

Table 4.3-9 Summary of Annual Construction Emissions

Year	Annual Emissions (tons/year)[2]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
2015	3.23	37.24	54.82	6.81
2016	0.47	5.37	6.91	0.88

Source: SCE 2014
Note:
[1] Additional activities proposed for constructing the 66-kV subtransmission lines in 2014 include retaining wall installation (30 units), removal of structures at discrete locations in Segment 4, as well as the installation of J-towers instead of TSPs at four selected locations along Segment 4.
[2] CalEEMod outputs based on the applicant's proposed equipment, vehicle use and miles traveled, phasing, and implementation of APM AQ-1 and APM AQ-2.

Overview of Operational Impacts

Criteria air pollutants would be generated during operation the proposed project. The applicant would inspect the proposed 66-kV subtransmission lines at least once per year by driving and/or flying the line routes. Similarly, the telecommunications components would require routine maintenance once per year. Combustion exhaust emissions would be generated from vehicles used during routine inspection and maintenance activities. Routine substation maintenance would include equipment testing, equipment monitoring, and repair. Operations at Santa Clara, Casitas, and Carpinteria Substations would not require personnel in addition to the applicant's existing staff in the region, and no permanent vehicles would be stationed at each of these locations.

Criteria air pollutants emissions from vehicles that would be used during operation of the proposed project were estimated based on the expected vehicle miles traveled by routine maintenance personnel and corresponding emission factors derived by CalEEMod. A summary of estimated maximum daily operational emissions of criteria air pollutants is presented in Table 4.3-10. Detailed calculations and assumptions for all operational sources are presented in Appendix C.

Table 4.3-10 Summary of Operational Emissions

Estimated Annual Emissions (lbs/day)[1]					
ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
0.01	0.02	<0.01	<0.01	0.72	0.07

Source: SCE 2012
Notes:
[1] CalEEMod outputs based on applicant assumptions about vehicle use and miles traveled during routine operation and maintenances.
Key:

CalEEMod	California Emission Estimator Model
CO	carbon monoxide
lbs	pounds
NO_X	oxides of nitrogen
PM_{10}	particulate matter less than or equal to 10 micrometers in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 micrometers in diameter
ROG	reactive organic gases
SO_2	sulfur dioxide

Impact Assessment

Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.
LESS THAN SIGNIFICANT

The proposed project's air pollutant emissions would primarily occur during the construction phase, with an overall duration of 24 months. Major sources of emission during construction would be off-road diesel-fired construction equipment and vehicles, which would emit air pollutants in a transient pattern along each of the proposed 66-kV subtransmission line segments. The proposed project's construction and operation would not involve the use of stationary sources.

Consistency with the applicable air quality plan generally relies on a comparison of the project's stationary and mobile emissions with the regional air quality plan inventories, as well as a comparison of project-based and countywide population growth projections. In Ventura County, inconsistent projects are those that cause the existing population to exceed the population forecasts contained in the most recently adopted air quality plan. The proposed project would not induce population growth; therefore, inconsistency or conflict with the implementation of the Ventura County AQMP is not applicable. Moreover, SBCAPCD and VCAPCD have prepared air quality plans that establish air quality emissions inventories and controls for ozone precursors (NO_X and ROG) sources in the proposed project area. As shown in Table 4.3-11, the proposed project's construction emissions in year 2015 would represent approximately two percent of the regional emissions inventories for NO_X and less than 0.2 percent for ROG. In 2016, construction emissions would represent less than 0.1 percent for ROG and NO_X of each county's emissions inventory. Operational emissions would be an even smaller fraction, considering that the estimated vehicle use would generate less than 1 percent of construction emissions. In addition, the applicant would comply with all applicable APCD regulations that result from implementation of the air quality plans. Therefore, the proposed project would not conflict with or obstruct implementation of the applicable air quality plans and would result in a less than significant impact under this criterion.

Table 4.3-11 Comparison of Project Maximum Emissions with Countywide Inventories in Air Quality Plans

Project Construction Emissions vs. Plan Inventory Data	ROG	NO_X
2015 Maximum Daily Emissions (Summer)	**0.05 tons/day**	**0.45 tons/day**
2016 Maximum Daily Emissions (Summer)	**0.002 tons/day**	**0.02 tons/day**
Ventura County 2012 Planning Emissions Inventory	**48.65 tons/day**	**39.75 tons/day**
Percentage of Ventura County 2012 Planning Emissions Inventory represented by the project's 2015 Maximum Daily Emissions (Summer)	0.10 %	1.13 %
Percentage of Ventura County 2012 Planning Emissions Inventory represented by the project's 2016 Maximum Daily Emissions (Summer)	<0.01%	0.05 %
Santa Barbara County 2020 Planning Emissions Inventory	**30.97 tons/day**	**23.46 tons/day**
Percentage of Santa Barbara County 2020 Planning Emissions Inventory represented by the project's 2015 Maximum Daily Emissions (Summer)	0.16 %	1.9 %
Percentage of Santa Barbara County 2020 Planning Emissions Inventory represented by the project's 2016 Maximum Daily Emissions (Summer)	0.01 %	0.08 %

Table 4.3-11 Comparison of Project Maximum Emissions with Countywide Inventories in Air Quality Plans

Project Construction Emissions vs. Plan Inventory Data	ROG	NO_X

Source: SCE 2014; SBCAPCD 2011a; VCAPCD 2008
Key:
NO_X oxides of nitrogen
ROG reactive organic gases

Impact AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

SIGNIFICANT

As shown in Table 4.3-4, the South Central Coast Air Basin (where the proposed project would be constructed) reported more than 20 days exceeding the national and state ozone 8-hour standard, as well as the state PM_{10} 24-hour standard in the year 2012. The VCAPCD and SBCAPCD have adopted air quality management plans and regulations to control ozone and PM_{10} emissions within their jurisdictions.

Criteria air pollutants would be emitted from the engine exhaust of diesel- and gasoline-fueled on-site construction equipment and on-road vehicles (i.e., delivery trucks and crew vehicles). On-site earth-moving activities (e.g., trenching) and vehicle travel on access roads would also generate fugitive dust. Heavy-duty diesel- and gasoline-powered equipment and vehicles at the work sites would include loaders, graders, backhoes, cranes, and trucks. Worker vehicles would include those used by the construction crews to commute to and from proposed project work and staging areas.

As discussed in Section 4.3.3.1, SBCAPCD and VCAPCD have not established quantitative thresholds of significance for short-term construction emissions within their jurisdictions. Therefore, the CPUC has opted to use SCAQMD Air Quality Significance Thresholds for Construction for the purpose of this EIR analysis. Estimates of maximum daily criteria air pollutant emissions that would result from project construction and the SCAQMD construction thresholds are summarized in Table 4.3-12.

Table 4.3-12 Summary of Estimated Maximum Daily Construction Emissions and SCAQMD Construction Thresholds[1]

	Daily Emissions (lbs/day)[2]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
2015 Daily Emissions	98.18	894.19	300.44	63.40
SCAQMD Threshold	75	100	150	55
Threshold Exceeded in 2015?	**Yes**	**Yes**	**Yes**	**Yes**
2016 Daily Emissions	4.18	45.96	26.95	4.37
SCAQMD Threshold	75	100	150	55
Threshold Exceeded in 2015?	**No**	**No**	**No**	**No**

Table 4.3-12 Summary of Estimated Maximum Daily Construction Emissions and SCAQMD Construction Thresholds[1]

	Daily Emissions (lbs/day)[2]			
	ROG	**NO_X**	**PM_{10}**	**$PM_{2.5}$**

Source: SCE 2014

Notes:

1. SBCAPCB and VCAPCD have not established quantitative thresholds of significance for short-term construction emissions within their jurisdictions. Therefore, the CPUC has selected to use SCAQMD Air Quality Significance Thresholds for Construction for the purpose of this EIR analysis.
2. SO_X and CO emissions from the proposed project are below 0.001 lbs/day and would not exceed any applicable threshold, therefore are not included in this table.
3.

Key:

NO_X	oxides of nitrogen	PM_{10}	particulate matter less than or equal to 10 micrometers in diameter
ROG	reactive organic gases	$PM_{2.5}$	particulate matter less than or equal to 2.5 micrometers in diameter

The result of the pollutant criteria analysis indicates that ROG, NO_X, PM_{10} and $PM_{2.5}$ emissions during the first year of construction (2015) would exceed the applicable thresholds and would be significant. The maximum daily construction emissions assume the incorporation of APM AQ-1 and APM AQ-2. There are no additional mitigation measures that would reduce PM_{10} and $PM_{2.5}$ emissions. Therefore, PM_{10} and $PM_{2.5}$ emissions from the first year of construction would be significant.

The ROG and NO_X emissions during the first year of construction can be reduced through the use of low emission engines for vehicles and equipment. The EPA and California Air Resource Board engines based on their ability to meet emission regulations using five tiers (i.e., Tier 0, Tier 1, Tier 2, Tier 3, and Tier 4). Tier 0 represents engines that can meet the basic emission regulations and Tier 4 represents engines that can meet the highest and strictest emission regulations. MM AQ-1 would require the applicant to use Tier 3 and Tier 4 vehicles and equipment during the first calendar year of construction to the greatest extent feasible to reduce ROG and NO_X emissions. Available off-road engine emission rates data from SCAQMD indicate that replacement of Tier 1 engines to Tier 3 would reduce NO_X emissions up to 59 percent and ROG emissions up to 85 percent, depending on the engine size. Replacement of Tier 1 for Tier 4 engines would reduce NO_X emissions up to 96 percent and up to 86 percent for ROG. Table 4.3-13 shows the estimated emissions with the implementation of MM AQ-1 to the maximum extent (i.e., 100 percent of the vehicle and equipment used for the project are rated Tier 4).

Table 4.3-13 Estimated Construction Emission with Implementation of MM AQ-1[1]

	ROG	**NO_X**
2015 Daily Emissions with MM AQ-1 Implemented[1]	13.75	35.77
SCAQMD Threshold	**75**	**100**

Note:

[1] Implementation of MM AQ-1 to the greatest extent feasible (i.e., 100 percent of the vehicle and equipment used for the project are rated Tier 4).

While implementation of MM AQ-1 to the maximum extent would reduce ROG and NO_X emissions to less than significant levels, the availability of the variety of vehicles and equipment required for construction equipped with Tier 3 and Tier 4 engines is unknown. As a result, it cannot be assumed that implementation of MM AQ-1 would reduce ROG and NO_X emissions to below SCAQMD

construction thresholds. Therefore, ROG and NO_X emissions from the first year of construction would be significant with the implementation of mitigation.

As shown in Table 4.3-12, construction emissions from the second year of construction would not exceed any of SCAQMD construction thresholds and would be less than significant.

Operation and maintenance activities associated with the project would be similar to those associated with the existing 66-kV subtransmission and substations. Emissions resulting from operation and maintenance activities are shown in Table 4.3-9 and are well below VCAPCD and SBCAPCD operational thresholds of significance. Therefore operation of the proposed project would have a less than significant impact on air quality standards.

Impact AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.

SIGNIFICANT

The proposed project is located in Ventura County, which is designated as nonattainment for NO_X, ROG, and PM_{10} with respect to NAAQS and CAAQS, and in Santa Barbara County, which is designated as nonattainment for NO_X, ROG, and PM_{10} with respect to CAAQS only (Table 4.3-3).

The SBCAPCD defines that "cumulative air quality impacts are the effect of long-term emissions of the proposed project on the projected regional air quality or localized air pollution problems in the County" (SBAPCD 2008). Due to Santa Barbara County's non-attainment status for NO_X, ROG and PM_{10}, the project's impacts would be cumulatively considerable. Implementation of MM AQ-1 would require the applicant to use low emission engines to the greatest extent feasible. However, MM AQ-1 would not reduce the project's NO_X, ROG, and PM_{10} emissions to less than significant. Therefore, the proposed project would result in a cumulatively considerable net increase in NO_X, ROG, and PM_{10} emissions within SBCAPCD that is significant.

Ventura County Air Quality Assessment Guidelines identifies projects with emissions of two pounds per day or greater of ROG or NO_X and that are inconsistent with the AQMP will have a significant cumulative adverse air quality impact. As discussed under Impact AQ-1, the proposed project is consistent with the VCAQMP. Therefore the proposed project would not contribute to a cumulative impact in Ventura County.

Operation and maintenance activities associated with the project would be similar to those associated with the existing 66-kV subtransmission and substations. Emissions resulting from operation and maintenance activities are shown in Table 4.3-9 and are well below VCAPCD and SBCAPCD operational thresholds of significance. Therefore operation of the proposed project would have a less than significant impact on cumulative emission of criteria pollutant.

Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations.

LESS THAN SIGNIFICANT

Sensitive receptors include schools, hospitals, residences, and other sensitive land uses. Land use conflicts can arise when sensitive receptors are located next to major sources of air pollutant emissions. As discussed in Section 4.11, "Noise and Vibration," the predominant types of receptors located within 1 mile of the proposed project components include single-family residences, schools, places of worship, and recreational users of the Los Padres National Forest (Highway 33

Corridor). Sensitive receptors located in the proximity of work areas could be exposed to criteria air pollutants and *diesel particulate matter*—a toxic air contaminant produced by diesel-fueled vehicles and equipment that is also classified as a subset of PM_{10} and $PM_{2.5}$ emissions.

The applicant is required to comply with applicable VCAPCD and SBCAPCD regulations and has incorporated APM AQ-1 and APM AQ-2, which incorporate VCAPCD and SBCAPCD standards to reduce project-related construction emissions to the greatest extent practicable. In addition, implementation of MM AQ-1 would further reduce emissions. Construction activities would be transient, occurring for limited durations at locations along the length of the proposed 66-kV subtransmission segments and overhead telecommunication routes. Therefore, it is not anticipated that the proposed project would result in the exposure of sensitive receptors to substantial concentrations of toxic air contaminants during construction, and construction impacts under this criterion would be less than significant.

During operations, inspection and maintenance activities would require the use of a few vehicles for short time periods, similar to existing activities. Further, it is anticipated that some vehicles would not be fueled by diesel, and vehicles would be dispersed throughout a wide geographic area. Therefore, impacts during operations would be less than significant.

Impact AQ-5: Create objectionable odors affecting a substantial number of people.
LESS THAN SIGNIFICANT

Exhaust from construction vehicles and equipment may temporarily create odors due to the combustion of fuel that may be noticeable to people who work, reside, or participate in recreation activities near proposed construction sites. Odors generated by diesel exhaust would be reduced by the use of ultra-low-sulfur diesel and gasoline, in compliance with 13 California Code of Regulations 2262 and 2281. Paving activities during road work would also generate odors from hot asphalt sources. However, heavy-duty equipment and vehicles—major potential source of objectionable odors—would not be operated in the proximity of a substantial number of people, as the majority of residences, schools, and other sensitive land uses are located along the proposed 66-kV subtransmission lines and not along the more remote Segment 4 access roads. Two residences and a school would be located within 300 feet of the proposed work at the Carpinteria Substation, while most of the receptors located in the vicinity of the proposed project components are over 500 feet from the proposed work areas. The potential exposure of closest sensitive receptors to diesel combustion odors would be temporary during construction activities at the Carpinteria Substation. No other substances used or activities involved with the project are expected to produce objectionable odors. Therefore, impacts under this criterion would be less than significant during construction.

During operations, equipment used at the proposed project's substations would not create objectionable odors. Inspection and maintenance of the proposed substations and along the proposed 66-kV subtransmission and telecommunications line routes would require only a few vehicles for relatively short time periods and would be similar to existing operations. It is not anticipated that objectionable odors would be generated in amounts that would affect a substantial number of people. Therefore, it is not anticipated that the proposed project would create objectionable odors affecting a substantial number of people during operations, and impacts under this criterion would be less than significant.

4.3.4 Mitigation Measures

MM AQ-1: Tier 3 and 4 Off-Road Emissions Standards. Off-road diesel-powered construction equipment greater than 75 horsepower used during 66-kV subtransmission line or access road construction will meet Tier 3 and Tier 4 off-road emissions standards to the greatest extent feasible during any calendar year in which ROG and NO_X construction emissions are anticipated to exceed SCAQMD Air Quality Significance Thresholds for Construction. During these years, the applicant will provide the CPUC with annual reports detailing the percentage of off-road diesel-powered construction equipment greater than 75 horsepower used for the proposed project that meet the Tier 3 or Tier 4 classification. The report will also include justification—supported by letters from local rental equipment retailers, documentation from contractors, or other evidence—for any deficiencies in Tier 3 and Tier 4 engine usage where construction activities continue to exceed SCAQMD thresholds.

4.4 Biological Resources

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to biological resources. The work associated with the Getty, Goleta, Ortega, Ventura, and Santa Barbara Substations would occur within existing structures and would have no impact on biological resources; therefore, these components of the proposed project are not discussed further in this section. Impacts related to water resources are discussed in Section 4.9, "Hydrology and Water Quality," and impacts related to soils are discussed in Section 4.6, "Geology, Soils, and Mineral Resources."

4.4.1 Environmental Setting

Regional Context

The proposed project would be located north and east of U.S. Highway 101, between 1 and 6 miles from the California coastline. Elevations vary throughout the project area, which covers portions of the coastal plain and the nearby foothills and mountains of the western Transverse Ranges. Elevations range from 31 feet above mean sea level (AMSL) near the Carpinteria Substation at the western end of the proposed project, to 1,500 feet AMSL along Segment 4, to more than 1,800 feet AMSL along portions of Segment 3B near Rincon Peak.

The majority of the proposed project would be located on private lands, while three tower sites and associated access and spur roads in Segment 4 would be located within the Santa Barbara Front, a geographical unit of lands under the jurisdiction of the Los Padres National Forest and owned by the U.S. Forest Service (USFS). Land use in the immediate vicinity of Segments 3A, 3B, and 4 of the project area is dominated by agriculture (cattle grazing and orchards) and "open-space" areas covered by native vegetation communities, with low-density residential development and commercial areas (nurseries and row crops). Land use in the immediate vicinity of Segments 1 and 2 of the proposed project is dominated by agricultural areas used for cattle grazing and open space areas covered by native vegetation communities.

The proposed project would cross the headwaters of multiple small streams and creeks that flow into the ocean. Portions of the proposed project would be located in the lower gradient reaches of the Santa Clara River and Ventura River watersheds. While groundwater and surface water sources in the project area have been extensively developed for domestic and agricultural uses, the riparian corridors they support contrast sharply with an otherwise dry landscape.

The east-west orientation of the mountains in the vicinity of the proposed project combined with the region's distinct Mediterranean/marine climate, results in a unique botanic zone and mix of species. Predominately north- or south-facing slopes are dominated by alternating bands of sedimentary rock formations, with oak woodlands at lower elevations. Conifers exist in small patches along ridgetops and on north-facing slopes. Noxious weed infestations, including black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), Cape ivy (*Delairea odorata*), and other non-native species occur throughout the project area, especially along road and trail corridors.

4.4.1.1 Data Sources and Survey Methods

Literature Search and Review

Information on biological resources within the project area[1] was gathered preliminarily through desktop analysis and was supplemented with field surveys conducted by Southern California Edison (SCE, or the applicant) and its biological consultants. Results of field surveys, as reported in several technical reports provided by the applicant, were reviewed, including a biological technical report (Appendix D); several focused survey reports (e.g., sensitive plants, raptor nests, burrowing owls (*Athene cunicularia*), habitat assessments for specific special status species); and a wetland and other waters delineation report (Table 4.4-1). Desktop analyses were conducted by reviewing available scientific literature and accessing publically available agency databases and resources. The following list identifies each data resource that was reviewed during desktop analyses:

- California Natural Diversity Database (CNDDB) (CNDDB 2013) records search of the following U.S. Geological Survey (USGS) 7.5-minute quadrangles: Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak, as well as the 11 surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs;
- U.S. Fish and Wildlife Service (USFWS) (USFWS 2013a) and National Marine Fisheries Service (NMFS) (NMFS 2013) list of endangered, threatened, and proposed species for the Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak, as well as the 11 surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs;
- USFWS Critical Habitat Portal (USFWS 2013b) and NMFS (NMFS 2013);
- State & Federally Listed Threatened and Endangered Animals of California list (CDFW 2013a);
- Fully Protected Animals list (CDFW n.d.);
- State & Federally Listed Threatened, Endangered and Rare Plants of California list (CDFW 2013b);
- Special Animals List (CDFG 2011);
- Special Plants List (CDFW 2013c);
- California Native Plant Society (CNPS) (CNPS 2013) online Inventory of Rare and Endangered Vascular Plants of California for Carpinteria, Matilija, Pitas Point, Saticoy, Ventura, and White Ledge Peak, as well as the 11 surrounding quadrangles: Camarillo, Hildreth Peak, Lion Canyon, Little Pine Mountain, Ojai, Old Man Mountain, Oxnard, Santa Paula, Santa Paula Peak, Santa Barbara, and Wheeler Springs;

[1] For the Biological Resources section, the Project Area is defined as all proposed project sites where ground disturbance could occur, including crane pads, laydowns areas, pull-tensioning sites, tower foundation removal sites, associated yards, new spur roads, and sections of existing roads to be widened or improved.

1

Table 4.4-1 Biological Field Surveys Conducted for the Proposed Project

Survey Focus	Date	Method	Survey Extent	1	Getty Tap	2	3A	3B	4
Vegetation types and special status species habitat (Appendix D, SCE 2012)	May–June 1999	Reconnaissance surveys at tower sites to describe and map the vegetation and evaluate the potential for the habitats to support special status plant and wildlife species	50-foot radius around towers	X		X	X		X
Vegetation and habitat (changes since 1999 survey) (Appendix D, SCE 2012)	October 2005	Follow-up visit to document any changes to general habitat	50-foot radius around towers				X		
Vegetation and habitat (changes since 1999 survey) (Appendix D, SCE 2012)	September 2007	Follow-up visit to document any changes to general habitat and to survey previously un-visited sites	50-foot radius around towers	X					X
Vegetation and special status species habitat (Appendix D, SCE 2012)	December 2008, January–June 2009	Reconnaissance surveys at 3 tower sites on USFS land, and along some access roads, to describe and map the vegetation and to evaluate the potential for the habitats to support special status plant and wildlife species	50-foot radius around tower sites, and along access roads						X
Vegetation types and special status species habitat suitability (Appendix D, SCE 2012)	February–March 2012	Reconnaissance surveys to describe and map the vegetation and to evaluate the potential for the habitats to support special status plant and wildlife species; surveys were also specifically focused on nesting raptors and burrowing owls	Survey area (project area and 500-foot buffer)	X	X	X	X	X	X

Table 4.4-1 Biological Field Surveys Conducted for the Proposed Project

Survey Focus	Date	Method	Survey Extent	1	Getty Tap	2	3A	3B	4
Special status plant species (Appendix D, SCE 2012, BioResources 2013a)	May 2012, April 2013	In 2012: Targeted special status plant species with a known presence or a "High" or "Moderate" potential to be present. In 2013: focused on known locations, suitable habitat, and sites where genus of special-status species not in bloom were located but not identified in 2012.	100-foot buffer of alignment in areas where suitable habitat for special status species is present based on reconnaissance surveys.		X			X	X
Protected trees (BioResources 2013b)	December 2012, January, March-April 2013	Individual protected trees assessed to determine potential impacts. If determined to potentially be impacted, tree measured for size, health, location, etc.	2012: Reconnaissance surveys. 2013: Access roads (10-foot buffer) and construction areas where protected trees were previous identified.	X	X			X	X
Special status wildlife species (other than specific species identified in this table) (Appendix D, SCE 2012)	May–June 1999, February–March 2012	Incidental observations during vegetation and wildlife habitat surveys; no focused surveys for most special status wildlife species were conducted	50-foot radius around towers (1999); survey area (2012)	X	X	X	X	X	X
Nesting raptors (Appendix D, SCE 2012, BioResources 2013c)	May 2012, April-May 2013	Driving access roads, walking at tower sites to identify active raptor nests	2012: Project area and in 1-mile buffer. 2013: Project area and 500-foot buffer, also any nests found in 2012.		X			X	X

Table 4.4-1 Biological Field Surveys Conducted for the Proposed Project

Survey Focus	Date	Method	Survey Extent	1	Getty Tap	2	3A	3B	4
February 2012 – January 2014 Burrowing owl surveys (BioResources 2014)	Habitat Assessment: February-March 2012 Breeding season: April-June 2012; March-June 2013 Non-breeding season: October 2012-January 2013; September 2013-January 2014	Habitat assessment and surveys adhered to the protocol outlined in CDFW (2012)	Habitat assessment occurred in project area and 500-foot buffer. Surveys occurred in suitable habitat and 500-foot buffer.	X	X			X	X
Steelhead (Southern California DPS) Assessment in Sutton Canyon Creek (BioResources 2013d)	May 2012, and April and June 2013	Surveyed section of Sutton Canyon Creek to assess the conditions and potential for steelhead. Included dip-net surveys for aquatic organisms.	1-mile reach of Sutton Canyon Creek. Also surveyed part of Cañada Larga near Segment 1.	X					X
Drainages and waterways (Appendix D, SCE 2012)	December 2011	Initial field surveys to determine location of drainages and waterways	Project footprint (disturbance areas)	X	X	X	X	X	X

Table 4.4-1 Biological Field Surveys Conducted for the Proposed Project

Survey Focus	Date	Method	Survey Extent	1	Getty Tap	2	3A	3B	4
Waters of the US and state waters, including wetlands, streams, and riparian areas (BioResources 2013e)	May 2013	Field delineations in areas previously identified as potentially jurisdictional (via desktop and field surveys); used standard delineation methodology described by USACE and CDFW	500-foot buffer of project alignment, plus access roads (25-foot buffer)	X				X	X

Key:
CDFW California Department of Fish and Wildlife
DPS Distinct Population Segment
USACE U.S. Army Corps of Engineers
USFS U.S. Forest Service

1

- National Wetlands Inventory (USFWS 2013c);
- National Hydrography Dataset (USGS 2013);
- National Resources Conservation Service Hydric Soils (NRCS 2013);
- California Herps (2013);
- Birds of North America Online (2013);
- eBird.org (2013);
- California Bird Species of Special Concern (Shuford and Gardali 2008); and
- Mammals of North America (Reid 2006).

Surveys Conducted

Biological reconnaissance and focused surveys were conducted to identify and map the vegetation present in the project area and to evaluate the potential existence of plant communities and special status plant and wildlife species. Additionally, a delineation of waters of the U.S. and state waters was conducted. A summary of surveys is provided in Table 4.4-1. Additional information regarding survey methodology and results is provided in the applicant's biological technical report (Appendix D).

4.4.1.2 Local Vegetation Types and Plant Communities

Vegetation type is a broad vegetative unit that is defined by stand structure and physiognomic features that are characteristic of the general vegetation. Project surveys identified the following five vegetation types in the project area: Chaparral, Grassland, Coastal Sage Scrub, Woodland, and Non-Native. Vegetation types were further subdivided into plant communities that are characterized and named by the dominant species according to Sawyer et al. (2009).

Chaparral is a vegetation type that can be sparse or dense, with shrubs standing 1 to 4 meters high and little to no understory or leaf litter. In southern California, chaparral is usually found on moderate to steep south-facing slopes with dry, rocky, shallow soils. Chaparral within the project area consists of four different plant communities: Greenbark Ceanothus Chaparral, Mixed Ceanothus Chaparral, Toyon Chaparral, and Lemonadeberry Chaparral.

Grassland is a vegetation type dominated by low herbaceous and grassy plants that form a continuous ground cover, or as understory patches below emergent shrubs, shrublands, and woodlands. Two different grassland communities are found within the project area: California Annual Grassland and Ruderal/Disturbed Grassland.

In southern California, *Coastal Sage Scrub* vegetation types are generally found in dry areas such as south-facing, steep slopes on clay-rich soils that are slow to release stored water. Coastal Sage Scrub forms a continuous to open canopy and generally occurs at lower elevations. This vegetation type consists of facultative drought-deciduous species that vary in size relative to the water supply present, but are commonly low, soft-woody shrubs approximately 1 meter in height. Coastal Sage Scrub within the project area consists of five different plant communities: California Sagebrush Scrub, Chaparral Mallow Scrub, Coyote Brush Scrub, Purple Sage Scrub, and Mulefat Scrub.

Woodlands include a broad range of plant communities. Woodlands are vegetation types dominated by tall, large shrubs and woody trees, forming an open to closed canopy that grows over

a scattered variety of low-growing shrubs and a grassy ground layer. Woodlands within the project area consist of five different plant communities: Coast Live Oak Woodland, Scrub Oak Woodland, Arroyo Willow Woodland, Southern California Black Walnut Woodland, and Southern Sycamore Alder Riparian Woodland.

Non-Native vegetation types include farmland such as orchards or crops, areas grazed by livestock, communities dominated by non-native species, and developed areas with ornamental and landscaped vegetation. Non-Native plant communities within the project area include Agricultural, Ruderal/Disturbed, Cape Ivy Infestation, and Developed.

4.4.1.3 Wildlife

Numerous wildlife species or their diagnostic signs were observed within the project area, including fish, reptile, amphibian, bird, and mammal species (listed in Appendix D).

4.4.1.4 Wildlife Movement and Urban/Wildland Interface

A wildlife corridor is defined as a linear landscape feature that allows animal movement between two patches of habitat or between habitat and geographically discrete resources such as water. Connections between extensive areas of open space are integral to maintaining regional biological diversity and population viability. Areas that serve as wildlife movement corridors are considered biologically sensitive because they can facilitate the persistence of special status species. In the absence of corridors, habitats become fragmented, isolated islands surrounded by development.

Aquatic and associated riparian corridors in the project area provide shade, cover, water, food, and discrete corridors for numerous bird, fish, reptile, amphibian, and mammal species. For example, the southern California steelhead (*Oncorhynchus mykiss*) Distinct Population Segment (DPS) is a special status species known to migrate and spawn in areas of the river systems located in the vicinity of the proposed project, which connect to their ocean habitat (see Section 4.4.2.2). Another wildlife corridor in the proposed project vicinity is the valleys of mountainous landscapes that serve as migration routes for many larger mammals, including mule deer (*Odocoileus hemionus*), coyotes (*Canis Latrans*), and mountain lions (*Puma concolor*).

The proposed project would be located in the Pacific Flyway for migratory waterfowl, shorebirds, and songbirds. The Pacific Flyway is a major north-south migratory corridor that generally follows a path through the coastal region of North America and into South America. This region provides suitable foraging and nesting habitat for many resident and migratory bird species. The Pacific Flyway links breeding grounds in northern latitudes to more southerly wintering areas. As part of the Pacific Flyway, the coastal beaches, Carpinteria Salt Marsh, estuaries, and Coast Range Mountains provide high-quality resting and foraging areas for numerous bird species during spring and fall migration and the winter for some species, such as the sharp-shinned hawk (*Accipiter striatus*).

4.4.1.5 Jurisdictional Waters

The applicant submitted a Wetland and Other Waters Delineation Report for the proposed project area (BioResources 2013e) to the U.S. Army Corps of Engineers (USACE) in June 2013, based on 60% completed engineering design. The applicant is seeking a jurisdictional determination from the USACE for 15 drainage features (Figure 4.4-1). The applicant assumes that all drainages

identified in the delineation report are both Waters of the U.S. and Waters of the State. A final delineation report will be submitted to USACE once engineering design has been finalized. Areas where the proposed project would cross waters identified as jurisdictional in the delineation report are shown in Figure 4.4-1.

4.4.2 Special Status Plants and Wildlife

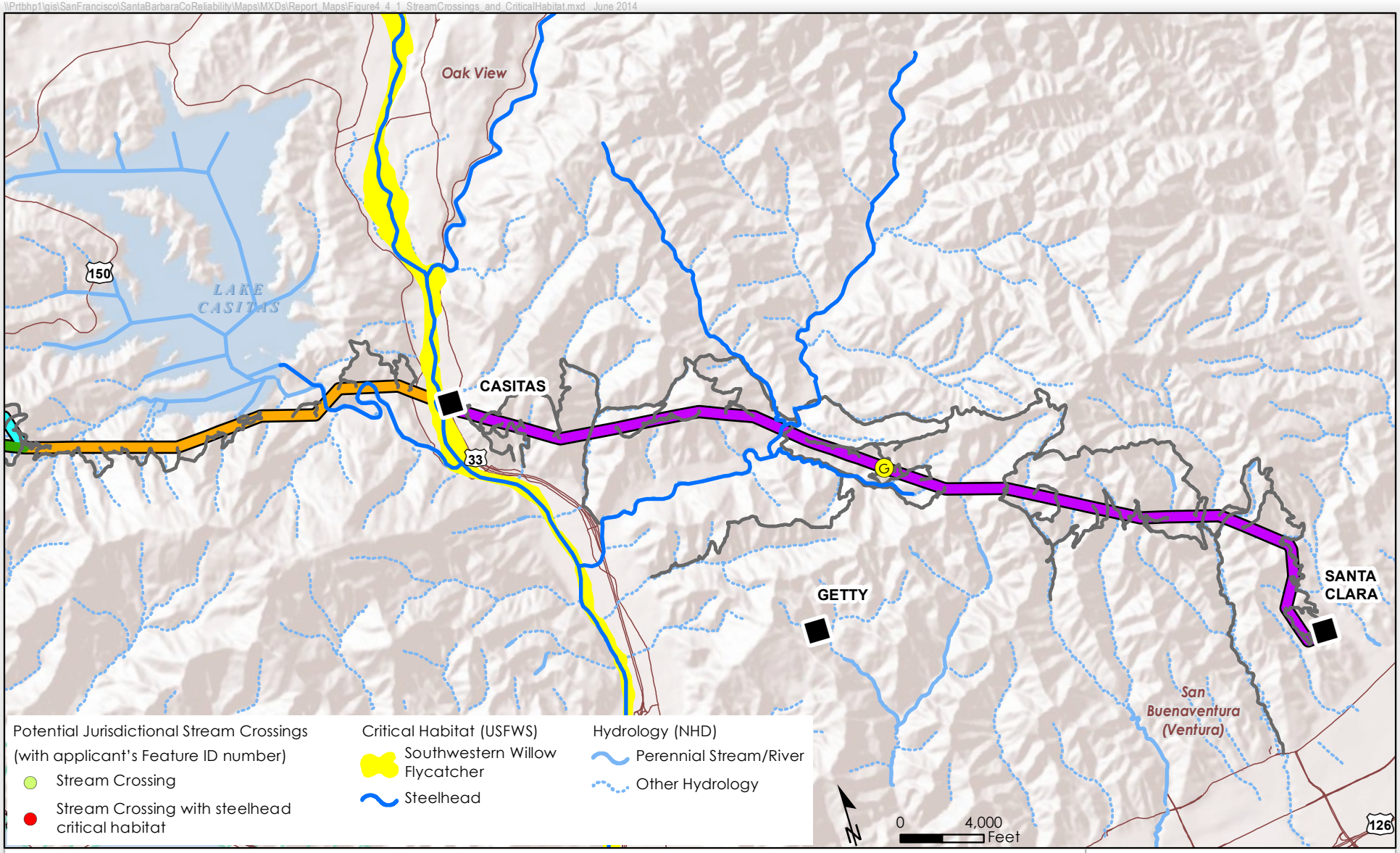
Special status species include plants and animals that are either formally listed under federal or state endangered species law, or not formally listed but meet the definitions of "Endangered" or "Rare" under California Environmental Quality Act (CEQA) Guidelines Section 15380, such as species considered rare by resource agencies, professional organizations (e.g., CNPS), the scientific community, and local ordinances.

In this document "special status species" refers to any of the following:

- Species listed as Endangered or Threatened under the Federal Endangered Species Act (ESA) (Title 50, Code of Federal Regulations [CFR] Section 17.11 or 17.12);
- Species listed as Endangered or Threatened under the California Endangered Species Act (CESA) (Sections 670.2 or 670.5, Title 14, California Code of Regulations);
- Species designated as Candidate or Proposed for listing under the ESA;
- USFWS Birds of Conservation Concern;
- CNPS Rare Plant Ranks (RPR) 1B and 2;
- Species designated as Species of Special Concern, Watch List, or Fully Protected or listed under the California Native Plant Protection Act by the California Department of Fish and Wildlife (CDFW);
- Species designated as Sensitive Species or Management Indicator Species by the USFS; or
- Species protected under local ordinances including the County of Santa Barbara and County of Ventura.

The potential for special status species to occur within the project area was assessed as present, high, moderate, and low based on the following criteria using the data sources and survey results provided in Section 4.4.1.1:

- **Present:** The species was observed in the survey area during project field surveys.
- **High:** CNDDB or other records within 1 mile of the proposed project and suitable habitat is present. Species could be present or otherwise impacted by the proposed project.
- **Moderate:** CNDDB or other records between 1 and 5 miles of the project area and suitable habitat is present. Species could be present or otherwise impacted by the proposed project.
- **Low:** CNDDB or other records within 5 miles of the project area but limited suitable habitat is present; or there are no CNDDB or other records within 5 miles of the project area but suitable habitat is present; or any CNDDB or other records are more than 25 years old. Species could be present or otherwise impacted by the proposed project.



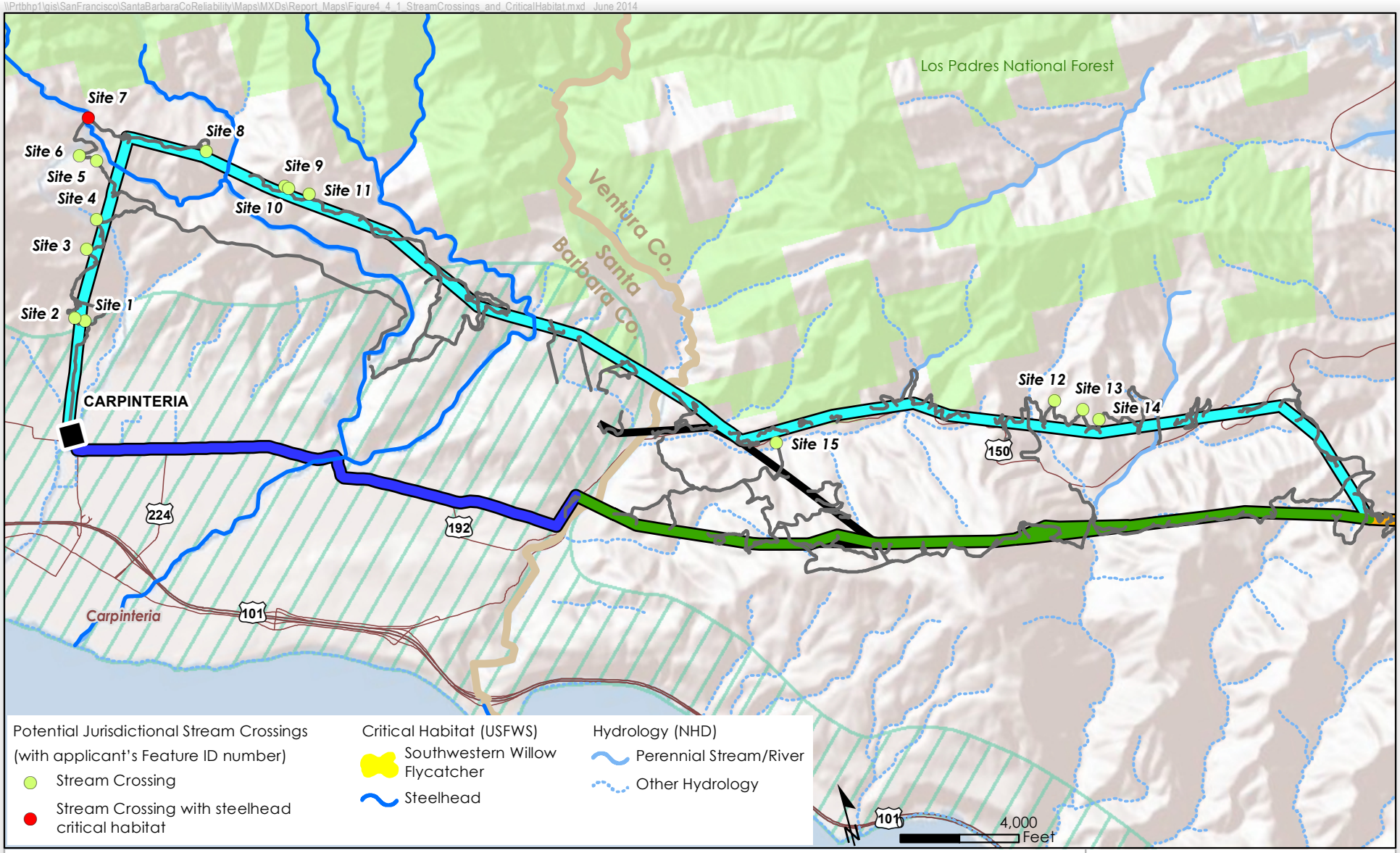
Existing Electrical Subtransmission Lines
- Segment 1
- Segment 2
- Segment 3A
- Segment 3B
- Segment 4
- Segment 5

- Existing Substation Locations
- Getty Tap
- Los Padres National Forest (USFS)
- Access Roads

- Major Roads
- County Boundary
- Bio Preserve Areas Coastal Commission Zone

Figure 4.4-1a
Potential Jurisdictional Water Crossings and Designated Critical Habitat

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California



Existing Electrical Subtransmission Lines
- Segment 1
- Segment 2
- Segment 3A
- Segment 3B
- Segment 4
- Segment 5

- Existing Substation Locations
- Getty Tap
- Los Padres National Forest (USFS)
- Access Roads
- Major Roads
- County Boundary
- Bio Preserve Areas Coastal Commission Zone

Figure 4.4-1b
Potential Jurisdictional Water Crossings and Designated Critical Habitat

Santa Barbara County
Reliability Project
Santa Barbara and
Ventura Counties California

A number of plant and wildlife species identified in the literature review were determined to have no potential to occur within the project area because the project area does not contain suitable habitat, is located outside of the species' known geographic range, or is located outside of the species' known elevation range. Species with no potential to occur were not included in this Environmental Impact Report. A list and analysis of all species identified in literature review and searches is provided in Appendix D.

4.4.2.1 Special Status Natural Communities

The CDFW considers a natural community to have special status if it has a limited distribution throughout the state or within a county or region; special status natural communities are often vulnerable to environmental effects of projects (CDFG 2009). These plant communities may or may not contain special status species or their habitat. The title and description of the special status natural communities listed below are derived from *A Manual of California Vegetation* (Sawyer, Keeler-Wolf and Evens 2009) and the Holland classification system (Holland 1986).

As identified by surveys described in Section 4.4.1.1, the following plant communities are considered special status natural communities: Southern California Black Walnut Woodland, Southern Coast Live Oak Riparian Forest, and Southern Sycamore Alder Riparian Woodland (Figure 4.4-2).

Southern California Black Walnut Woodland is dominated by California black walnut (*Juglans californica californica*) and coast live oak (*Quercus agrifolia*). This community is typically associated with riparian corridors and hill slopes. Threats include impacts from development, grazing, fire, and invasion by non-native weedy species (Anderson 2002; Appendix D). The woodland is at high risk of elimination due to very restricted range, very few populations, steep declines, or other factors.

Southern Coast Live Oak Riparian Forest is dominated by coast live oak and is typically found on slopes, stream banks, and terraces in soil derived from sandstone or clay. Threats include impacts from development and sudden oak death syndrome. The CDFW recognizes multiple different communities within the Coast Live Oak Woodland alliance; however, because the applicant's field surveys did not distinguish between the different communities, all Coast Live Oak Woodland in the project area is considered special status in this document.

Southern Sycamore Alder Riparian Woodland is dominated by California sycamore (*Platanus racemosa*) and alder (*Alnus* sp.) and is typically found in gullies and around intermittent streams, springs, streambanks, and terraces adjacent to floodplains. This woodland is one of the state's rarer vegetation communities because California sycamore does not compete well with other, more obligate wetland trees such as alders and willows and is often grazed or flooded due to human activities.

Riparian Communities are plant communities located in or adjacent to a stream and are dependent upon, and occur because of, the stream itself (CDFG ESD 1994). They are considered special status natural communities by CDFW (2009) due to their limited distribution in California. Additionally, these communities often contain special status plants.

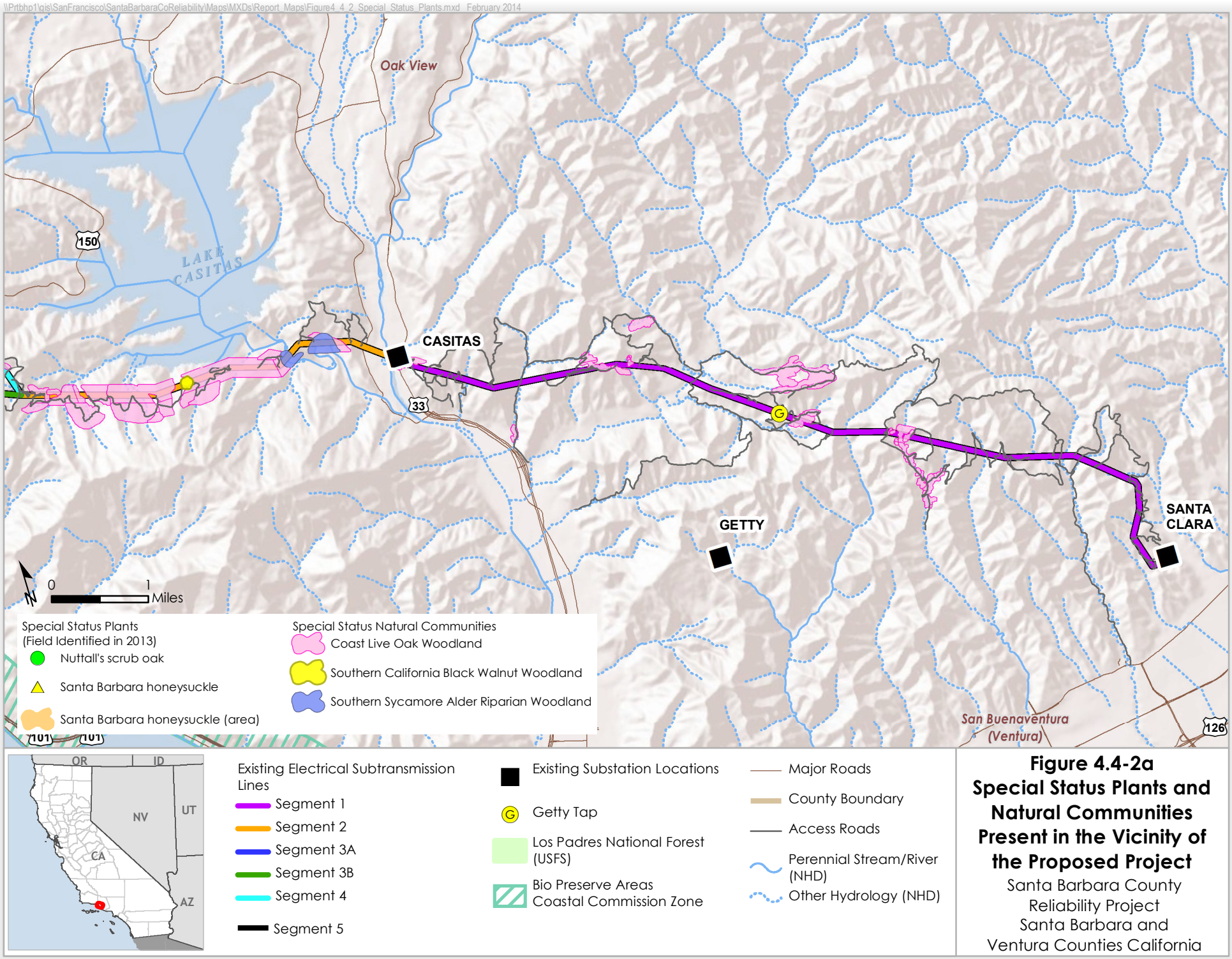


Figure 4.4-2a
Special Status Plants and Natural Communities Present in the Vicinity of the Proposed Project
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

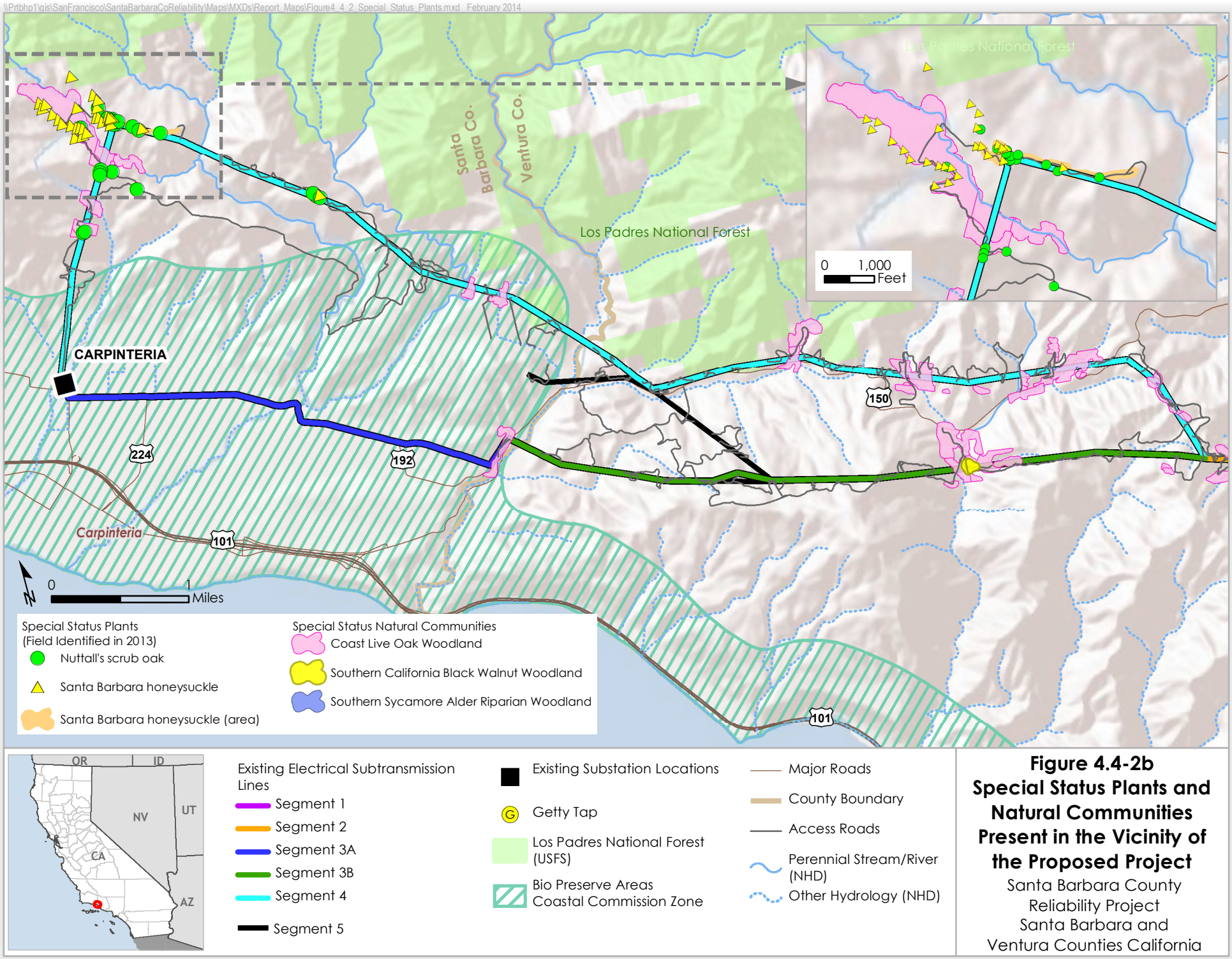


Figure 4.4-2b
Special Status Plants and Natural Communities Present in the Vicinity of the Proposed Project
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

Coastal Commission Environmentally Sensitive Habitat Areas

Most of the Carpinteria Valley is included within the Coastal Zone, established by the California Coastal Act, due to its "important habitat, recreational, and agricultural resources" (Santa Barbara County 2009a). All of Segment 3A and portions of Segment 4 are located within the Coastal Zone of the Carpinteria Valley ("Bio Preserve Areas" in Figure 4.4-1). The project area spans Franklin Creek, Carpinteria Creek, a tributary to Rincon Creek, and other tributaries located within the Coastal Zone. The Coastal Act limits impacts on designated environmentally sensitive habitat areas (ESHAs) within the Coastal Zone. Native plants and streams are designated ESHAs in the project area.

4.4.2.2 Critical Habitat

The NMFS and USFWS designate critical habitat for species that are listed as threatened or endangered under the ESA. The alignment of the proposed project and some associated project features intersect designated critical habitat for two species: southern California steelhead DPS and southwestern willow flycatcher (*Empidonax traillii extimus*). The geographic extents of the critical habitats for these species are shown on Figure 4.4-1.

Southern California Steelhead

Within the project area, critical habitat for the southern California steelhead DPS is designated in the USGS Ventura River Hydrologic Unit (4402) at the Ventura River, Cañada Larga, Cañada Seca, and Coyote Creek, and in the USGS South Coast Hydrologic Unit (3315) at Carpinteria Creek, Gobernador Creek, and Sutton Creek (NMFS 2005). Steelhead are not likely to breed in the project area due to lack of habitat, low flow, and/or barriers downstream, but critical habitat may be utilized for migration and rearing during wet periods (Stoecker et al. 2002; Cachuma Conservation Resource District et al. 2005; BioResources 2013d). This species, *O. mykiss*, has two forms: steelhead are migratory and exhibit an anadromous life history; and rainbow trout do not migrate to the ocean and complete ocean-to-freshwater cycles due to impassable barriers or other causes (Stoecker et al. 2002) and are not federally listed. Thus, individuals of this species present at streams in the project area vicinity may be rainbow trout instead of steelhead.

No towers (new or existing) or other proposed work areas are located within designated critical habitat for this species. However, road improvements are proposed at one location where a project access road crosses designated critical habitat. At Sutton Canyon Creek on Segment 4, in-stream ground disturbance would occur where the dirt access road crosses the bed of the creek and widening of the road curve is proposed. Sutton Creek is ephemeral and dry most of the year. This reach would potentially be used by this species only when water is flowing or in areas where permanent pools are present. Additionally, road improvements are proposed at other stream crossings that flow into designated critical habitat.

Southwestern Willow Flycatcher

Within the project area, critical habitat for southwestern willow flycatcher is designated at the Ventura River riparian zone, located immediately west of the Casitas Substation. No towers (new or existing) or other proposed areas of ground disturbance would be located within designated critical habitat for this species. Disturbance resulting from overhead work to install telecommunications wire or marker balls using helicopters could occur.

4.4.2.3 Special Status Plant Species

Special status plant species with the potential to occur in the project area are listed in Table 1 of Appendix E, along with their habitat requirements and an indication of their known presence or assessment of their potential to occur within the project area. Based on geographic and elevation ranges and the presence of suitable habitat within the project area, eight special status plant species of CNPS RPRs 1 and 2 species have a "Moderate" or "High" potential to occur in the project area.

No federal or state listed threatened or endangered plant species are documented in the project area or have a "Moderate" or "High" potential to occur in the project area. The only federally listed plant species with potential to occur in the project area is Braunton's milkvetch (*Astragalus brauntonii*) (Endangered), which has "Low" potential to be present. Two special status species, the Santa Barbara honeysuckle (*Lonicera subspicata var*. *subspicata*) and Nuttall's scrub oak (*Quercus dumosa*) were observed during field surveys in the project area (BioResources 2013a, Figure 4.4-2). Santa Barbara honeysuckle was observed in chaparral, cismontane woodland, and coastal sage scrub habitats in the project area. Nuttall's scrub oak was observed in chaparral, closed-coned coniferous forests, and coastal sage scrub.

Additional discussion of the special status plant species potentially occurring in the project area, including their natural history and habitat requirements, is provided in the Appendix D.

4.4.2.4 Special Status Wildlife Species

Special status wildlife species with the potential to occur in the project area are listed in Table 2 of Appendix E, along with their habitat suitability and an indication of their known presence or assessment of their potential to occur within the project area.

No federal or state listed threatened or endangered wildlife species are documented in the project area or have a "Moderate" or "High" potential to occur in the project area. However, numerous other special status wildlife species have "Moderate" or "High" potential to occur, while others were observed during field surveys. Additional discussion of the special status wildlife species potentially occurring in the project area, including their natural history and habitat requirements, is provided in Appendix D. Discussions of USFWS designated critical habitats of special status wildlife species is discussed in Section 4.4.2.2.

4.4.3 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern biological resources in the project area.

4.4.3.1 Federal

Federal Endangered Species Act

The USFWS has jurisdiction over terrestrial and freshwater species and the NMFS has jurisdiction over marine and anadromous species listed as threatened or endangered under Section 9 of the ESA. The USFWS and NMFS also have lists of species that are designated as species of concern but not yet formally listed. The ESA protects listed species from harm, or "take," which is broadly

defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." This definition includes impacts that may harm a species indirectly.

For any project that could affect a listed species and that involves a federal agency, the federal agency must consult with the USFWS or NMFS in accordance with Section 7 of the ESA. The USFWS or NMFS issues a Biological Opinion and, if the project does not jeopardize the continued existence of the listed species, issues an incidental take permit (ITP). When no federal nexus is present, proponents of a project that may involve potential impacts on a listed species may consult with the USFWS or NMFS and apply for an ITP under Section 10 of the ESA. Section 10 requires an applicant to submit a Habitat Conservation Plan that specifies project impacts and mitigation measures (MMs).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) was established in 1918 and amended in 1989. Its fundamental goal is to establish an international framework for the protection and conservation of migratory birds. Under this act, taking, killing, or possessing migratory birds is unlawful. This act instructed the USFWS to develop regulations regarding the harvest or taking of such birds. Unless permitted by regulations, the act provides that it is unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess, offer to or sell, barter, purchase, deliver, or cause to be shipped, exported, imported, transported, carried, or received any migratory bird, part, nest, egg, or product, manufactured or not.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (and as amended several times) protects both the bald eagle (*Haliaeetus leucocephalus*) and the golden eagle (*Aquila chrysaetos*) by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds. Pursuant to the ESA, permits were formerly available to "take" bald eagles as part of otherwise lawful activities. When the bald eagle was removed from the ESA (i.e., "delisted") in June 2007, however, the provision for issuing permits for activities that could "disturb" or otherwise incidentally take eagles was eliminated. This left significant constraints on a broad range of otherwise legal activities. To address this problem, rule changes made in September 2009 (74 Federal Register 175) finalized permit regulations to authorize limited take of these species associated with otherwise lawful activities. The regulations comprise a USFWS program that allows the issuance of two new types of permits, one addressing take in the form of disturbance or actual physical take of eagles (50 CFR 22.26), and a second permit that would provide for removal of nests (50 CFR 22.27). Most permits issued under the new regulations are expected to be those that would authorize disturbance, as opposed to physical take (e.g., take resulting in mortality). Permits for physical take will be issued in very limited cases only, where every precaution has been implemented to avoid physical take and where other restrictions and requirements will apply. In an effort to implement the new regulations, the USFWS has recently published technical guidance, which includes recommendations for applicants to prepare and submit an avian protection plan for USFWS review.

Clean Water Act (Sections 401 and 404)

The Clean Water Act (CWA) of 1977 regulates restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. The USACE and the U.S. Environmental Protection Agency regulate the discharge of dredged or fill material into waters of the United States under Section 404 of the CWA. Project proponents may be required to obtain a permit from the

USACE for all discharges of fill material into waters of the United States before proceeding with a proposed action. For the purposes of this document, all wetlands (defined broadly, i.e., including streams) are considered to have the potential to be determined as jurisdictional by the USACE.

Section 401 of the CWA requires that any applicant for a USACE CWA Section 404 permit also obtain a Water Quality Certification from the state. California Water Code Section 13260 requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements)." Under the Porter-Cologne Act definition, the term *waters of the state* is defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." If the proposed project will require the disturbance of a wetland, and USACE determines that the wetland is not subject to regulation under Section 404 of the CWA, then Section 401 water quality certification is not required. However, the California Regional Water Quality Control Board (RWQCB) may require a permit and/or waste discharge requirements if fill material is placed into waters of the state. If all wetlands cannot be avoided as part of the proposed project, the applicant would be required to file an application for a permit and/or waste discharge requirements with the RWQCB.

National Forest Management Act (16 U.S.C. § 1600)

The National Forest Management Act of 1976 requires National Forests to maintain viable populations of "native and desired non-native vertebrate species ... well distributed in the planning area."

U.S. Department of Agriculture Environmental Compliance Fish and Wildlife Policy (Departmental Regulation 9500-4)

The Secretary of Agriculture's Policy on Fish and Wildlife directs the USFS to "manage habitats for all native and desired nonnative plants, fish and wildlife species to maintain viable populations of each species; identify and recover threatened and endangered plant and animal species" and to avoid actions "which may cause species to become threatened or endangered."

U.S. Forest Service Manual

The Forest Service Manual (FSM) contains legal authorities, objectives, policies, responsibilities, instructions, and guidance for the planning and execution of programs and activities within and related to National Forests. FSM Chapter 2670 directs the USFS to "develop/implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions" and to "avoid or minimize impacts on species whose viability has been identified as a concern." If impacts cannot be avoided, the USFS "can allow or disallow the impact, but the decision must not result in loss of species viability or create a significant trend towards federal listing." FSM Chapter 2672.4 specifies that a Biological Evaluation be prepared to determine if a project may affect any USFS or USFWS listed species. In addition to protections to federally listed species, FSM Chapter 2672.11 delegates to each Regional Forester the authority to designate "Sensitive" species, which are defined as:

> "Those plant and animal species identified by a Regional Forester for which population viability is a concern, as evidenced by: a. Significant current or predicted downward trends in population numbers or density, or b. Significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution."

Land Management Plan: Southern California National Forests

The Land and Resource Management Plans established by the USFS for the southern California national forests describe the strategic direction at the broad program level for managing the land and its resources over the next 10 to 15 years.

As stated in the Los Padres National Forest Strategy, the objective of USFS threatened, endangered, proposed, candidate, and sensitive species management is to "manage habitat to move listed species toward recovery and de-listing" and to "prevent listing of proposed and sensitive species." For management of species of concern, the primary objective is to "maintain and improve habitat for fish, wildlife, and plants, including those with the following designations: game species, harvest species, management indicator species and watch list species."

The Los Padres National Forest Strategy includes specific measures to meet the six goals of the USFS National Strategic Plan. These goals are: Goal 1- Reduce the risk from catastrophic wildland fire, Goal 2 - Reduce the impacts from invasive species, Goal 3 - Provide outdoor recreation opportunities, Goal 4 - Help meet energy resource needs, Goal 5 - Improve watershed conditions, and Goal 6 – Perform mission-related work in addition to that which supports the agency's goals.

4.4.3.2 State

California Endangered Species Act

The CESA, administered by the CDFW, prohibits taking of species listed as threatened and endangered under Section 2080 of the California Fish and Game Code (CFGC). The CFGC defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" and differs from the federal ESA in that it does not include habitat destruction in its definition of take. A project applicant is responsible for consulting with the CDFW early in project planning stages to avoid impacts on rare, endangered, and threatened species and to develop appropriate mitigation planning, if applicable.

Alternatively, where a proposed project is likely to impact species that are listed under both federal and state protection, the provisions of Section 2080.1 allow the CDFW to review the federal document in support of the federal ITP (i.e., the Biological Assessment document) for consistency with the CESA. If the federal Biological Assessment addresses the substantial requirements of the CESA, the CDFW may determine that it is consistent with the CESA and state requirements. This mechanism of an integrated approach to CESA/ESA compliance precludes the need for a separate state ITP.

Species of Special Concern (CFGC §§ 670.2 and 670.5)

Species considered future protected species by the CDFW are designated California Species of Special Concern (SSC). SSC species currently have no legal status, but are considered indicator species useful for monitoring regional habitat changes.

Native Plant Protection Act (CFGC §§ 1900-1913, 2062 and 2067)

The Native Plant Protection Act identifies the types of plant species eligible for state listing. Eligible species include those identified on CNPS RPRs 1A, 1B, and 2, and meet the definitions of Sections 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (CESA) of the CFG Code.

Wildlife Protection (CFGC §§ 3503, 3503.5, 3511, 3513, 4700, 5050, and 5515)

Section 3503 specifies the following general provision for birds: "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Disturbance that results in the incidental loss of fertile eggs or nestlings, or otherwise leads to nest abandonment and/or loss of reproductive effort is considered "take" by CDFW. Section 3513 provides for the adoption of the MBTA provisions. As with the MBTA, this state code offers no statutory or regulatory mechanism for obtaining an ITP for the loss of non-game migratory birds.

Sections 3511, 4700, 5050, and 5515 govern the protection of bird, mammal, reptile, amphibian, and fish species identified as "fully protected." Fully protected animals may not be harmed, taken, or possessed. The classification of "fully protected" was the state's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Most of the species on these lists have subsequently been listed under the ESA or CESA.

Stream Protection (CFGC §§ 1600-1616)

The CDFW regulates activities that would interfere with the natural flow of or substantially alter the channel, bed, or bank of a lake, river, or stream (see Section 4.9, "Hydrology and Water Quality"). These activities are regulated under CFGC Sections 1600 to 1616 and require a lake or streambed alteration agreement. Requirements to protect the integrity of biological resources and water quality are often conditions of streambed alteration agreements. Conditions that CDFW may require include avoidance or minimization of vegetation removal, use of standard erosion control measures, limitations on the use of heavy equipment, limitations on work periods to avoid impacts on fisheries and wildlife resources, and requirements to restore degraded sites or compensate for permanent habitat losses. If the proposed project will not affect a drainage system, a streambed alteration agreement will not be required.

California Environmental Quality Act Guidelines § 15380

CEQA Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria.

California Coastal Act of 1976 (California Public Resources Code § 30000 et seq.)

The California Coastal Act establishes public access requirements and development restrictions within the Coastal Zone, an area that extends off the California coast to the state's outer limit of jurisdiction, and inland generally 1,000 yards from the mean high tide or to the first major ridgeline paralleling the sea, whichever is less (with certain exceptions). In Ventura and Santa Barbara Counties, the Coastal Zone generally follows the 1,000-yard limit, with several exceptions.

Sections 30231, 30233, and 30236 of this act limit impacts on streams, wetlands, and their biological resources by providing for minimization of wastewater discharges and runoff, minimization of alteration of natural streams, and maintaining the actual vegetation buffer areas, among other things. Upland habitats in the Coastal Zone are protected under Section 30240,

which limits impacts on designated ESHAs. The California Coastal Act specifically calls for protection of ESHAs.

California Public Resources Code §§ 4292 and 4293

Section 4292 directs the owner, controller, operator, or maintainer of electrical transmission lines in mountainous land, forest-covered land, brush-covered land, or grass-covered land to maintain around and adjacent to any tower or pole that supports a switch, fuse, transformer, lightning arrester, line junction, or dead end or corner pole; a firebreak which consists of a clearing of not less than 10 feet in each direction from the outer circumference of such tower or pole; and Section 4293 requires the same to maintain a clearance of 4 feet from any line which is operating at 2,400 or more volts, but less than 72,000 volts.

California Public Utilities Commission, General Order 95, Rule 35

Rule 35 mandates that certain vegetation management activities be performed in order to establish necessary and reasonable clearances, and establishes minimum clearances between line conductors and vegetation that under normal conditions shall be maintained. These requirements apply to all overhead electrical supply and communication facilities covered by this General Order, including facilities on lands owned and maintained by California State and local agencies.

4.4.3.3 Regional and Local

Santa Barbara County Coastal Land Use Plan

The purposes of the Santa Barbara County Coastal Land Use Plan (CLUP) include protection of coastal resources and providing greater access and recreational opportunities for the public's enjoyment while allowing for orderly and well-planned urban development and the siting of coastal-dependent and coastal-related industry. The Santa Barbara County CLUP incorporates, to the maximum possible extent, local plans and policies that are consistent with the California Coastal Act. All electric transmission lines proposed for the Coastal Zone are "developments" under the California Coastal Act; thus, the County of Santa Barbara has permit review over them.

The Santa Barbara County CLUP identifies Native Plants as one of 13 ESHAs. Policies 9-35 and 9-36 encourage native oak preservation and require developments to preserve areas of significant amounts of native vegetation, respectively. The Santa Barbara County CLUP also identifies streams as an ESHA and Policies 9-37 to 9-43 preserve riparian vegetation and habitat for dependent species, as well as water quality.

County of Santa Barbara Coastal Zoning Ordinance (Santa Barbara County Code, Chapter 35, §140 et seq.)

This ordinance requires a coastal development permit for the removal of any tree within the Coastal Zone that is 6 inches or more in diameter measured 4 feet above the ground and 6 feet or more in height that meet the following criteria:

- Trees located in a county street right-of-way
- Trees located within 50 feet of any major or minor stream except when such trees are removed for agricultural purposes
- Oak trees

- Trees used as a habitat by monarch butterflies (D*anaus plexippus*).

County of Santa Barbara Deciduous Oak Tree Protection and Regeneration Ordinance (Santa Barbara County Code, Chapter 35, §§ 35-910 et seq.)

The County of Santa Barbara Deciduous Oak Tree Protection and Regeneration Ordinance protects deciduous oak trees, specifically valley oaks (*Quercus lobata*) and blue oaks (*Quercus douglasii*), 4 inches or greater in diameter at breast height outside of the Coastal Zone and urban boundaries. The ordinance generally provides that a public utility may remove protected oak trees within a utility easement and these removals will not be counted toward thresholds set out in Section 35-908 or Section 35-909. A permit may be necessary for the tree removals and mitigation measures may accompany the permit. Valley oaks and blue oak would not likely occur within the project area. However, if any deciduous oaks are impacted, this ordinance will apply.

Ventura County Tree Protection Regulations (Ventura County Non-Coastal Zoning Ordinance §§ 8107-25)

Under Ventura County regulations, protected trees include all oaks and sycamores 9.5 inches in circumference or larger (measured 4.5 feet above ground), trees of any species with a historical designation, trees of any species 90 inches in circumference or larger, and most native trees in the Scenic Resources Protection Zone with a circumference greater than 9.5 inches. If pruning (beyond specified limits), removal, trenching, excavation, encroachment into the protected zone (5 feet outside the canopy's edge and a minimum of 15 feet from the trunk), alteration, or felling is part of a project that is not exempt per the regulations, the project would obtain the applicable permit and must adhere to the mitigation measures contained therein.

4.4.4 Impact Analysis

4.4.4.1 Methodology and Significance Criteria

Impact analysis for biological resources was conducted by (1) gathering and vetting information from numerous sources (see description of sources in Section 4.4.1 in addition to the data provided by the applicant) and (2) evaluating temporal and spatial effects on habitats and organisms potentially present within the project area and within a regional watershed context. Recent survey data provided by the applicant were assessed for accuracy and for appropriate implementation of resource agency survey protocols. Calculations for temporary and permanent disturbance to habitats were based on the applicant's projections of land disturbance from proposed project features. Potential impacts and appropriate minimization and mitigation measures (MMs) were discussed in depth with resource agencies, specifically the USACE, USFWS, NMFS, and CDFW, and regional authorities such as Santa Barbara County.

This impact analysis identifies and describes potential impacts on biological resources within the project area, including impacts caused by construction at tower work sites, laydown areas, pulling/tensioning sites, associated yards, and access roads. The analyses evaluate foreseeable impacts on the baseline conditions of the biological resources according to the following significance criteria. The criteria were defined based on the checklist items presented in Appendix G of the CEQA Guidelines. The proposed project would cause a significant impact on biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Significance criterion (f) ("Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?") does not apply for this project. The project does not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan; therefore, this significance criterion is not applicable.

4.4.4.2 Applicant Proposed Measures

The applicant has included the following applicant proposed measures (APMs) related to biological resources for the proposed project:

- **APM BIO-1:** Pre-construction biological surveys for special status plants and wildlife would be conducted 0 to 30 days before the start of construction by a qualified biologist in all laydown/work areas. If a special status species is encountered, biologists will record the location, take a photograph, and delineate a buffer area, as appropriate, where activities should be restricted for the protection of the resource. If impacts on the special status plant(s) or wildlife cannot be avoided, SCE will consult with the appropriate resource agency or agencies.
- **APM BIO-2:** To the extent feasible, SCE would minimize impacts and permanent loss to native vegetation types, vegetation that may support special status species, and known populations of special status plants at construction sites by avoiding construction activities in areas flagged to be avoided. If it is not possible to avoid impacts on native vegetation, a project revegetation plan may be prepared in consultation with the appropriate agencies for areas of native habitat temporarily impacted during construction.
- **APM BIO-3:** Biological monitors would monitor construction activities in wildlife habitat areas that may contain special status species, critical habitat for those species, or unique resources to ensure that such species, habitat, or resources are avoided.

- **APM BIO-4:** SCE would conduct project-wide nesting bird surveys. SCE would, if feasible, remove trees, vegetation, subtransmission structures, and poles outside of the nesting season. If a tree, subtransmission structure, or pole containing a raptor nest must be removed during nesting season, SCE biologists would consult with the appropriate resource agencies. If work is scheduled to take place in close proximity to an active nest, appropriate nesting buffers or other measures would be established based on consultation with the appropriate resource agencies, or an adaptive management plan would be prepared to address nesting birds, subject to the approval of the CDFW. This project-specific Nesting Bird Management Plan would allow for implementation of species-specific buffer modification guidelines provided by a qualified utility avian biologist; nest buffers would be determined by species' sensitivity to disturbance, the nature of the construction activity, and the environmental conditions surrounding the nest.
- **APM BIO-5:** During the pre-construction surveys, a qualified biologist would identify any potential San Diego desert woodrat (*Neotoma lepida intermedia*) middens within 50 feet of project activities. At the discretion of a qualified biologist, an exclusion buffer would be established around any woodrat middens that can be avoided, and these exclusion zones would be flagged or fenced to protect the nest during the breeding season (October through June). If a woodrat midden cannot be avoided by the proposed project's activities, an appropriate resource agency would be consulted regarding a potential buffer reduction.
- **APM BIO-6:** A pre-construction, focused burrowing owl protocol survey shall be conducted no more than 30 days prior to commencement of ground-disturbing activities within suitable habitat to determine if any occupied burrows are present. If occupied burrows are found, adequate buffers shall be established around burrows based on a project-specific nesting bird management plan or consultation with the appropriate agencies. If occupied burrows cannot be avoided, an appropriate relocation strategy would be developed in conjunction with the CDFW and may include collapsing burrows outside of nesting season and using exclusionary devices to reduce impacts on the burrowing owl. Biological monitors would monitor all construction activities that have the potential to impact active burrows.
- **APM BIO-7:** The National Pollutant Discharge Elimination System Construction General Permit would require SCE to develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies best management practices (BMPs) to avoid or minimize impacts to water quality and riparian habitat during construction. See Appendix B for example BMPs provided by SCE.

Additionally, APM GEN-1 (development of a Worker Environmental Awareness Plan) and APM AQ-1 (minimization of fugitive dust) would apply to impacts related to biological resources. See Table 2-10 for the full APM.

4.4.4.3 Impacts Analysis

Impact BIO-1: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?
LESS THAN SIGNIFICANT WITH MITIGATION

Special Status Plants. Direct impacts on special status plants and their habitat would result from vegetation trimming, removal, or crushing; fugitive dust deposits, which reduces plant photosynthesis; excavation of soils, which can suffocate and/or damage plants' roots; and the application of herbicides for fire protection and weed control. These activities could result in mortality or injury to individual plants, or the loss or degradation of populations or habitat. Direct impacts resulting from construction of structures related to the 66-kV subtransmission line and telecommunications routes, new access roads, areas of improvement on existing access roads, and any other associated areas with long-term ground disturbance would be permanent in nature. Direct impacts resulting from work in the areas surrounding new structures, tower removals, laydown yards, pull and tensioning sites, and any other ground disturbances that would be restored to original or native vegetation condition after construction has been completed would be temporary in nature. However, re-growth of some shrub or tree species may be long-term in duration. Grasses and herbs would be expected to re-establish within the next one to three growing seasons after construction, but many shrubs and trees could take decades (20–30 years) to grow to original stature and stand condition.

Indirect impacts on special status plants would result primarily through limited habitat fragmentation, introduction or spread of noxious and invasive weed species, and altered fire regimens. Disturbance to and loss of habitat could degrade adjacent special status plants and plant communities through fragmentation and edge effects, resulting in a reduced seed load and/or altered soil chemistry or composition. Much of the proposed project would be sited in previously disturbed areas and, therefore, would not significantly fragment contiguous habitat for special status plant species but could still fragment habitat on a localized scale (e.g., at towers or new roads). Construction activities also have the potential to degrade surrounding habitats by introducing or spreading populations of noxious or invasive weed species that could out-compete native special status plants. As a result, the establishment of such species has the potential to result in the loss of special status plants and in general limit the functionality of plant communities by significantly altering native species composition and, consequently, fire regimes.

Special Status Wildlife. Construction activities could result in direct impacts on special status species through mortality or injury to individual animals resulting from collisions with vehicles and equipment, hazardous material spills, or fires caused by construction crews. Noise and visual disturbances during construction could result in direct impacts on birds and other wildlife through nesting avoidance or nest abandonment within work areas or in adjacent areas. Although loss of individual animals is permanent, small losses of individuals would not likely be significant in terms of a species' broader population health, unless the species is very rare.

Indirect impacts on special status species would primarily result from the loss of suitable habitats (e.g., vegetation, burrows, rock piles), degradation of habitats through fragmentation and edge effects, and degradation through the introduction or spread of noxious and invasive weed species that would alter native plant species' compositions and densities. These effects could lead to adverse impacts on special status wildlife species and their habitats, including increased predation,

lower reproductive success, loss of foraging habitat, habitat avoidance, lower carrying capacities of remaining suitable habitats, and altered fire regime. These indirect impacts would be permanent at all permanent project components, including new structures related to the 66-kV subtransmission line and telecommunications routes, new access roads, and areas of improvement on existing access roads. Indirect impacts at the work areas surrounding new structures, tower removal sites, laydown yards, pull and tensioning sites, and any areas with ground disturbance that would be restored post-construction would be temporary in nature, although re-growth of some wildlife habitats, such as shrubs and trees, could be long-term in duration. Given that many special status wildlife species are considered rare or have reduced range sizes, indirect impacts resulting from habitat loss or degradation could result in significant impacts on a species.

The extent of permanent and temporary impacts to vegetation in the project area is detailed in Table 4.4-2.

Table 4.4-2 Disturbance to Vegetation within the Project Area

Vegetation Type	Permanent Disturbance (acres)	Temporary Disturbance (acres)
Chaparral	2.765	4.108
Grassland	1.814	2.278
Coastal Sage Scrub	43.892	57.313
Woodland	13.8634	22.473
Agriculture	6.587	10.848

Source: SCE 2012

Impacts on federally, state, and county protected species would be partially reduced through compliance with the conditions of applicable county, state, and federal permits. Additionally, implementation of APM BIO-1 (pre-construction surveys), APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-7 (SWPPP measures), APM AQ-1 (minimization of fugitive dust, including vehicle speed limits), and APM GEN-1 (Worker Environmental Awareness Plan) would reduce impacts on special status plants and wildlife species in general, but not to a level that is insignificant. Incorporation of MM BIO-1 through MM BIO-7 (Section 4.4.5) would further reduce impacts. MM BIO-1 requires all project-related construction activities to be restricted to approved access roads and construction areas that are clearly indicated. This measure also requires sensitive resources such as hydrologic features, special status natural communities, special status plants, and known wildlife habitat, including active bird nests and habitat occupied by special status species, to be clearly marked (e.g., with signs, flagging, ropes, or fencing) and avoided, unless previously approved. MM BIO-2 stipulates that the pre-construction surveys and clearance sweep surveys be conducted for special status species. MM BIO-3 requires the applicant to develop a noxious and invasive species control plan that will aid with the restoration of native plant communities and the protection of native wildlife habitat. MM BIO-4 limits the impacts on native vegetation and trees, thereby also reducing impacts on special status wildlife habitats by limiting habitat removal. MM BIO-5 requires the applicant to develop a habitat restoration and monitoring plan prior to construction and mitigate for impacts on specific special status plants, trees, and natural communities that may be important to native wildlife habitats.

MM BIO-6 and MM BIO-8 would further reduce impacts to a level that is less than significant for wildlife. MM BIO-6 provides measures to prevent entrapment of wildlife in project trenches and other excavations as well as to protect wildlife by preventing access to project-related trash. MM BIO-7 provides guidelines for reducing impacts on special status wildlife resulting from lighting

during nighttime construction. MM BIO-8 reduces impacts on special status aquatic wildlife species by placing restrictions on travel and construction near hydrologic features.

The species discussed below are analyzed individually because they were observed during field surveys; have a "High" potential to occur within the project area; have an elevated conservation status (i.e., listed as threatened or endangered, or designated critical habitat is present); or require a permit or compensation for impacts they or their habitat may incur as a result of the proposed project.

Special Status Plants

Two special status plant species were observed during field surveys at numerous locations along access roads and at tower sites on Segment 4: Santa Barbara honeysuckle and Nutall's scrub oak. The potential for impacts via the loss of individual specimens of these species is high. Other special status plant species were not observed but still have a moderate or high potential to occur (Appendix E).

Special Status Invertebrates

Monarch butterflies would be impacted if coastal conifer forests or eucalyptus groves that serve as winter roost sites are disturbed. Direct impacts could occur either through removal/injury to trees or through noise or ground vibrations that would disturb a wintering colony. Implementation of APM BIO-1 through APM BIO-3 and APM GEN-1 would reduce impacts, but not to a level that is less than significant. Incorporation of MM BIO-1 through MM BIO-8, described above, for impacts on special status wildlife species in general, will further reduce impacts on this species to a level that is less than significant.

Special Status Fish

Impacts on special status fish would primarily result from ground disturbance associated with construction activities in or near streams, ponds, rivers, or other aquatic habitats, including excavation as well as vehicle and equipment traffic. These activities could result in direct impacts on special status fish through mortality or injury to individuals. Mortality and injury could result from collisions with vehicles traveling through water features, in-stream excavation, increased sediment loads, and hazardous material spills. Indirect impacts on special status fish would primarily result from the degradation or loss of suitable spawning, rearing, or migrating habitats or the deterioration of water quality. In addition, alteration of streambeds, loss of in-water structures and debris that provide cover from predators, and loss of riparian vegetation on the banks of aquatic habitat that helps lower water temperatures and prevents erosion could all result in indirect impacts on special status fish and fish in general. Higher sediment loads resulting from construction excavation or run-off could affect fish not only at project crossing sites, but also fish populations for miles downstream.

The applicant has proposed access road rehabilitation, widening, or other construction ground activities at 15 locations on Segment 4 where access roads cross streams. The detailed work plans are not finalized, but some would disturb the current streambed and/or riparian habitat.

Arroyo chub (Gila orcuttii)

Arroyo chub is known to be present in drainages throughout the region and was observed near Segment 1 during field visits in the breeding season (SCE 2013). Direct and indirect impacts on arroyo chub may result from construction during road rehabilitation/widening at Segment 4

stream crossings. Road rehabilitation/widening could result in direct impacts if releases of hazardous materials occurred from the project vehicles or equipment, or from short-term increases in turbidity or sediment discharge during construction, particularly if construction occurs during spawning season for this species. The short-term sediment increases could be significant during high water levels and could exceed the level of disturbance caused by storm flows and cattle crossing. Arroyo chub are adapted to survive relatively turbid and hypoxic conditions; however, depending on the flow levels and construction methods used, these disturbances could create conditions that would exceed the physiological threshold of the species or eggs. Long-term indirect impacts could occur on arroyo chub as a result of habitat changes or increased sediment releases due to the removal of riparian habitat, changes in the streambed (e.g., from the installation of gabion retaining walls or culverts), or changes in the slopes and areas of access roads during road rehabilitation/widening. Long-term sediment releases would be localized, are not expected to create conditions that would exceed the physiological threshold of the species or eggs, and are not expected to be greater than those caused by storm flows, cattle crossing, and the vehicular use of the channel at other locations. Loss or degradation of habitat due to removal of riparian vegetation could be localized and permanent.

Implementation of APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-7 (SWPPP measures), and APM GEN-1 (Worker Environmental Awareness) would reduce impacts on Arroyo chub, but not to a level that is less than significant. Incorporation of MM BIO-1 and MM BIO-4 through MM BIO-7, for special status wildlife in general, would further reduce impacts on this species. In addition, incorporation of MM BIO-8 (in-stream restrictions to avoid spawning season and a monitoring plan for jurisdictional streams) would reduce impacts on Arroyo chub to a level that is less than significant.

Southern California Steelhead DPS (Including Critical Habitat)

Steelhead is known to be present in drainages throughout the region and in the project area, including recent sightings documented in the Ventura River less than 0.5 mile from the intersection of Segments 1 and 2, and in lower reaches of Carpinteria Creek at least 5 miles downstream of proposed project work areas (Entrix and Woodward Clyde 1997; Stoecker et al. 2002). Additionally, multiple rainbow trout, the non-anadromous form of the species, have been documented approximately two miles downstream from the project area in Carpinteria Creek (Stoecker et al. 2002). Steelhead spawning season extends from January to March in most drainages, but lasts from January to June in larger streams, including the Ventura River (Entrix and Woodward Clyde 1997). Designated critical habitat for this species (USFWS 2013b) is present in drainages that would be crossed by the project alignment, including Cañada Larga and Cañada Seca on Segment 1, the Ventura River and Coyote Creek on Segment 2, and Carpinteria Creek, Gobernador Creek, and Sutton Creek on Segments 3A and 4.

The applicant is planning in-stream work associated with road rehabilitation in and upstream of designated critical habitat for this species in the Carpinteria Creek drainage system on Segment 4, in designated critical habitat at the access road crossing of Sutton Creek, and in two ephemeral drainages that flow into critical habitat in Sutton Creek and four ephemeral drainages that flow into critical habitat in Carpinteria Creek (Sites 5-11, Figure 4.4-1). Road rehabilitation at other stream crossings in the project area not associated with critical habitat (Sites 1-4, 12-14, Figure 4.4-1) could impact steelhead or restoration potential downstream of the project area in Franklin Creek or Las Sauces Creek. Steelhead are not known to be present at any stream crossings where ground-disturbing work is proposed; however, the habitat value for steelhead is considered high in parts of the project area, including the upper Carpinteria Creek drainage system (Entrix and Woodward

Clyde 1997; Stoecker et al. 2002; Cachuma Resource Conservation District & Carpinteria Creek Watershed Coalition 2005; BioResource Consultants, Inc. 2013e). Until recently, the Carpinteria Creek drainage system has had numerous barriers against movement to the ocean downstream of the project alignment (Stoecker et al. 2002; Cachuma Conservation Resource District et al. 2005), preventing migration between the creeks in the project area and the ocean. However, multiple current efforts to remove barriers and restore streams for steelhead are rapidly changing habitat availability in the Carpinteria Creek drainage system and in the region. Additionally, the Carpinteria Creek system possesses the best restoration potential for steelhead in the region, and the presence of rainbow trout in the system indicates the habitat suitability for the species (Stoecker et al. 2002; Cachuma Resource Conservation District & Carpinteria Creek Watershed Coalition 2005).

Direct impacts on steelhead critical habitat and indirect impacts on downstream steelhead may result from construction during the clearance of riparian vegetation and road widening at Sutton Creek. These activities would lead to a permanent impact on approximately one acre of critical habitat. Additionally, indirect impacts on downstream steelhead and/or critical habitat may result from road widening, the installation of stabilized structures (e.g., retaining walls, culverts, down-gradient velocity dissipaters), and the clearance of riparian vegetation associated with road rehabilitation at other project stream crossings (Boughton et al. 2006). These construction activities could lead to releases of hazardous materials, transport of increased sediment loads, particularly during spawning season and in high flow conditions, barriers to steelhead migration, or loss or degradation of rearing habitat (Stoecker et al. 2002 Boughton et al. 2006). If steelhead migrate into streams in the project area after restoration is complete, additional impacts due to increased sediment loads, introduced barriers, or habitat loss could occur.

Implementation of APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-7 (SWPPP measures), and APM GEN-1 (Worker Environmental Awareness) would reduce impacts on critical habitat and steelhead present at downstream locations, but not to a level that is less than significant. Incorporation of MM BIO-1 and MM BIO-4 through MM BIO-7, for special status wildlife in general, would further reduce impacts on this species and critical habitat. In addition, incorporation of MM BIO-8 (in-stream restrictions to avoid steelhead spawning season and a monitoring plan for jurisdictional streams) would reduce impacts on critical habitat and steelhead to a level that is less than significant.

Special Status Amphibians

The project area contains suitable habitat for coast range newt (*Taricha torosa*) and California red-legged frog (*Rana draytonii*). Coast range newt was observed in Sutton Canyon Creek during field surveys in Segment 4 (BioResources 2013d). California red-legged frog was not observed during surveys, but USFWS-designated critical habitat is located less than one mile upstream of the Ventura River project crossing (in San Antonio Creek; USFWS 2013b) and may be present in streams throughout the project area. Impacts on these species would primarily occur at access road crossings of streams where ground disturbance is planned during road improvement and curve-widening activities. The applicant has not identified any wetlands or streams at or adjacent to tower work sites. At the sites where habitat is present, direct impacts on these species through loss or injury could result from vehicle and equipment collisions, if hazardous materials spills occur, or if sediment loads and turbidity levels are increased in water. Small areas of habitat used by these species may be temporarily impacted due to trimming or removal of riparian or upland vegetation, and small areas of habitat may be permanently lost as a result of access road rehabilitation. Due to the limited amount of habitat loss relative to the availability of habitat for

these species in the region, impacts on these species would be considered adverse but reduced with implementation of APM BIO-1 (pre-construction surveys), APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-7 (SWPPP measures), and APM GEN-1 (Worker Environmental Awareness) but not to a level that is less than significant. Incorporation of MM BIO-1 through MM-BIO-7, for impacts on special status wildlife species in general, MM BIO-8 (in-stream restrictions to avoid breeding season and a monitoring plan for jurisdictional streams), and MM BIO-9 (red-legged frog impact reduction measures) will further reduce impacts to a level that is less than significant.

Special Status Reptiles

The project area contains suitable habitat for western pond turtle (*Actinemys marmorata*), California legless lizard (*Aniella pulchra pulchra*), coast horned lizard (*Phrynosoma blainvillii*), and two-striped garter snake (*Thamnophis hammondii*). Western pond turtle was observed during field surveys near Segment 1 (SCE 2013). Small areas of habitat used by these species may be temporarily impacted due to vegetation trimming or removal, or the construction and use of a temporary construction pad, and small areas of habitat may be lost as a function of access road rehabilitation or the construction of new spur roads or permanent crane pads. In the case of western pond turtle, impacts could occur primarily at access road crossings of streams where ground disturbance is planned during road improvement and curve-widening activities. The applicant has not identified any wetlands or streams at or adjacent to tower work sites. At the sites where habitat is present, direct impacts on these species through loss or injury could result from vehicle and equipment collisions, if hazardous materials spills occur, or if sediment loads and turbidity levels are increased in water. Due to the limited amount of habitat loss relative to the availability of habitat for these species in the region, impacts on reptile species in general would be considered adverse but reduced with implementation of APM BIO-1 (pre-construction surveys), APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-7 (SWPPP measures), and APM GEN-1 (Worker Environmental Awareness) but not to a level that is less than significant. Incorporation of MM BIO-1 through MM-BIO-8, for impacts on special status wildlife species in general, will further reduce impacts on this species to a level that is less than significant.

Special Status Birds and Migratory Birds

The project area contains suitable habitat for special status birds and those protected by the MBTA and BGEPA. Foraging and nesting habitat used by birds, including special status species observed during field surveys [Cooper's hawk (*Accipiter cooperii*), golden eagle (*Aquila chrysaetos*), northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), bald eagle (*Haliaeetus leucocephalus*), loggerhead shrike (*Lanius ludovicianus ludovicianus*), song sparrow (*Melospiza melodia*), and least Bell's vireo (*Vireo belli pusillus*)], may be temporarily impacted due to vegetation trimming or removal for project construction, and some habitat may be lost on Segments 3A, 3B, and 4 as a function of access road rehabilitation or the construction of new spur roads. These activities could result in direct take of birds through mortality or injury to individual birds or the loss of active nests. Noise and visual disturbances during construction could result in direct impacts on birds through nesting habitat avoidance or nest abandonment, both within work areas and in adjacent areas. Additional direct impacts could result from collision with structures and electrocution on the subtransmission lines, which can be difficult for birds to detect for various reasons such as during night flight or during inclement weather conditions. Many standard designs of electrical industry hardware place conductors and groundwires close enough together that larger birds can touch them simultaneously with their wings or other body parts, causing electrocution. Standards to avoid conflicts between birds and new power lines have been well described by the Avian Power

Line Interaction Committee (APLIC 2012) and the applicant has committed to designing structures consistent with these guidelines for the 66-kV subtransmission lines (see Project Description, Section 2.2.1.6). Unless the species is very rare, any direct impacts resulting from the loss of individuals would be temporary in terms of the overall survival of a species.

Vegetation clearing, grading, and other ground-disturbing activities would result in indirect impacts on birds by removing nesting habitat, foraging habitat, and by degrading adjacent habitat through fragmentation and the introduction or spread of noxious or invasive wildlife and plant species. Construction activities across the proposed project may discourage foraging within the immediate vicinity of an active work site; this disruption in foraging is expected to be localized and temporary.

Construction disturbance that results in loss of individual birds, or during the general bird breeding season for the region that results in loss of fertile eggs or nestlings, or otherwise leads to nest abandonment, would be considered a "take" by the USFWS under the MBTA, as well as by the CDFW under the CFGC (see Section 4.4.3). With implementation of APM BIO-1 (pre-construction surveys), APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-4 (nesting bird protection measures), and APM GEN-1 (Worker Environmental Awareness Plan), impacts on nesting birds would be partially reduced. APM BIO-4 requires bird nest surveys if construction is scheduled to occur during breeding season. Additionally, APM BIO-4 requires that if work is scheduled to take place in close proximity to an active nest that either appropriate disturbance buffers be implemented or a Nesting Bird Management Plan be prepared; however, APM BIO-4 does not require a Nesting Bird Management Plan. Incorporation of MM BIO-1 through MM-BIO-8, described above, for impacts on special status wildlife species in general, MM BIO-10, designed for nesting birds specifically, and MM BIO-11, the creation of an avian protection plan, would reduce impacts on birds to a level that is less than significant. MM BIO-10 requires the applicant to develop an agency-approved Nesting Bird Management Plan before the start of construction if any portion of the proposed project is scheduled to occur during the general bird breeding season.

Burrowing Owl

Portions of Segments 1, 3B, and 4 contain habitat suitable for burrowing owl (BioResources 2014). These areas provide suitable foraging and nesting habitat, and this species has been documented as a migrant or winter visitor in the vicinity of the proposed project (Appendix E). If burrowing owls are present in future seasons, however, construction of the proposed project could result in direct mortality of individuals and temporary and permanent habitat loss. Impacts on foraging or nesting burrowing owls would be considered adverse according to the MBTA and CFGC. With implementation of APM BIO-1, APM BIO-2, APM BIO-3, APM BIO-4, APM BIO-6 (burrowing owl protection measures) and APM GEN-1, impacts on burrowing owl populations would be partially reduced. Incorporation of MM BIO-1 through MM-BIO-8, described above, for impacts on special status wildlife species in general, MM BIO-10 and MM BIO-11, designed for birds in general, and MM BIO-12, designed for burrowing owls specifically, would reduce impacts on this species to a level that is less than significant. MM BIO-12 requires slightly more stringent measures than those provided under APM BIO-6, including the requirement for pre-construction surveys no more than 14 days prior to construction during breeding season.

Southwestern willow flycatcher (Including Critical Habitat)

USFWS-designated critical habitat for the southwestern willow flycatcher would be crossed by the proposed project at the Ventura River and its associated riparian habitat in Segment 2 (USFWS

2013b; Figure 4.4-1), and there are records of this species' occurrence in the project area in Segment 3A and 3B (Appendix E). Impacts on foraging and/or nesting southwestern willow flycatcher, including removal of a delineated territory (even if removal occurs outside the breeding season), would be considered a "take" according to the ESA, MBTA, and CFGC. With implementation of APM BIO-1, APM BIO-2, APM BIO-3, APM BIO-4 and APM GEN-1, impacts on southwestern willow flycatchers would be partially reduced. Incorporation of MM BIO-1 through MM-BIO-8, for impacts on special status wildlife species in general, MM BIO-10 and MM BIO-11, for impacts on birds in general, and MM BIO-13, designed for this species specifically, would reduce impacts to a level that is less than significant. MM BIO-13 requires habitat assessments at all jurisdictional drainages identified by the applicant (Figure 4.4-1) and any other drainage where this species could be affected, including the critical habitat at the Ventura River (due to overhead stringing by helicopter), with follow-up protocol nesting season surveys where habitat is present.

Least Bell's vireo

The proposed project would not traverse USFWS-designated critical habitat for least Bell's vireo (USFWS 2013b). However, this species uses riparian habitat similar to that used by the southwestern willow flycatcher. One individual of this species was observed for approximately five minutes near Segment 1 at Cañada Larga during field surveys in late July 2013 (SCE 2013). In addition, there are other records of least Bell's vireo at the Ventura River south of the proposed project and approximately 1 mile west of the proposed project (Appendix E). Impacts on foraging and/or nesting least Bell's vireo, including removal of a delineated territory (even if removal occurs outside the breeding season), would be considered "adverse" or "take" according to the ESA, MBTA, and CFGC. With implementation of APM BIO-1, APM BIO-2, APM BIO-3, APM BIO-4 and APM GEN-1, impacts on southwestern willow flycatchers would be partially reduced. Incorporation of MM BIO-1 through MM-BIO-8, for impacts on special status wildlife species in general, MM BIO-10 and MM BIO-11, designed for birds in general, and BIO-13, designed for this species specifically, would reduce impacts on this species to a level that is less than significant. MM BIO-13 requires habitat assessments at all jurisdictional drainages identified by the applicant and any other drainage where this species could be affected, including the Ventura River (due to overhead stringing by helicopter), with follow-up protocol nesting season surveys where habitat is present.

Special Status Mammals

The project area contains suitable habitat for American badger (*Taxidea taxus*), ringtail (*Bassariscus astutus*), San Diego desert woodrat, mule deer (*Odocoileus hemionus*), and mountain lion (*Puma concolor*). Evidence of presence was confirmed for American badger, mule deer, and mountain lion during field surveys (Appendix E). Small areas of habitat used by these species may be temporarily impacted due to vegetation trimming or removal, or the construction and use of temporary laydown/work areas, and small areas of habitat may be lost as a function of access road rehabilitation or the construction of new spur roads or permanent crane pads. Due to the limited amount of habitat loss relative to the availability of habitat for these species in the region, impacts on these species would be considered low, and would be partially reduced with implementation of APM BIO-1 (pre-construction surveys), APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-5 (San Diego desert woodrat protection measures), and APM GEN-1 (Worker Environmental Awareness Plan). APM BIO-5 reduces impacts on San Diego desert woodrat specifically by requiring disturbance buffers for active middens during breeding season. Incorporation of MM BIO-1 through MM-BIO-8, described above, for impacts on special status wildlife species in general, and MM BIO-14, designed for ringtails and American badgers specifically, would reduce impacts on these species to a level that is less than significant.

Operations and Maintenance Impacts

Operation of the proposed project would involve periodic inspection of the subtransmission structures, conductor, telecommunications cable, and substation infrastructure, and maintenance of access and spur roads and areas around subtransmission structures (e.g., grading, vegetation removal) to enable safe access. Inspection and maintenance activities would be infrequent, confined to previously disturbed areas, and of much lower intensity than the construction-related activities described above. Accordingly, these activities are not anticipated to have any substantial adverse effect on any candidate, sensitive, or special status species. However, the applicant will continue to adhere to the special status plant and wildlife APMs and MMs discussed in this document for any future inspection and maintenance activities (Section 4.4.4.1 and 4.4.5). The magnitude of adverse impacts on special status species during operations would be reduced to less than significant by complying with the conditions of applicable state and federal permits covering activities and by implementing the APMs and MMs described above for the construction phase of the proposed project.

Impact BIO-2: Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?

LESS THAN SIGNIFICANT WITH MITIGATION

Several special status natural communities are present within the proposed project area, including riparian communities, Southern Coast Live Oak Riparian Forest, Southern California Walnut Woodland, and Southern Sycamore Alder Riparian Woodland. CDFW considers these plant communities to be regionally sensitive because of their limited acreage, high wildlife value, lack of recruitment, and gradual loss to development. Additionally, the Coastal Commission and Santa Barbara County consider streams and native vegetation in the Coastal Zone to be ESHAs and specify measures for their protection.

Impacts from grading, trimming, or removal of plants within these communities may be adverse. Direct impacts on riparian communities, Southern California Walnut Woodland, Southern Coast Live Oak Riparian Forest, Southern Sycamore Alder Riparian Woodland, and ESHAs by the proposed project would result from vegetation removal and/or trimming during rehabilitation or widening of access roads, construction of new roads, grading of adjacent soils, or during construction of temporary or permanent drilling pads, laydown/work areas, storage yards, pull-tensioning sites, or crane pad/turnaround areas (Table 4.4-3). Additional direct impacts would result from fugitive dust deposits, which reduce plant photosynthesis, and the application of herbicides for fire protection and weed control. Indirect impacts would result primarily through limited habitat fragmentation or the introduction or spread of noxious and invasive weed species.

Riparian communities are present in Segment 4 of the project area. Direct impacts on these riparian communities would include trimming of riparian vegetation and grading/alteration of streambanks and streambeds during road improvements. Less than one acre of riparian habitat would be disturbed on Segment 4. Waters of the State were used as an estimate of disturbance to riparian communities in the project area because the applicant did not measure it directly. Waters of the State were measured to the outer boundary of the greater of either the top of bank measurement or the extent of associated wetland or riparian vegetation (BioResources 2013e).

Table 4.4-3 Special Status Plant Communities found within the Project Area

Special Status Plant Communities	Segment (s) of Occurrence	Temporary Disturbance Acreage [1]	Permanent Disturbance Acreage	Total Disturbance Acreage
Coast Live Oak Woodland	1, 2, 3B, 3A, 4	6.69	6.69	**14.70**
Southern California Black Walnut Woodland	2	0.12	0.12	**0.20**
Southern Sycamore Alder Riparian Woodland	2	0.01	0.01	**0.11**
	Total Acreage	**1.54**	**6.83**	**8.18**
Riparian Communities[2]	4	n/a	n/a	**0.49**

Source: SCE 2012, BioResources 2013e

Notes:

[1] Disturbance area is defined as all proposed project sites where ground disturbance could occur, including crane pads, laydown areas, pull-tensioning sites, tower foundation removal sites, associated yards, new spur roads, and sections of existing roads to be widened.

[2] The estimate for riparian habitat impacts is based on the calculated impacts on waters of the state (BioResources 2013e), and the actual amount of riparian habitat may change.

Southern California Walnut Woodland plant community is present in at least two locations in the project survey area (includes a 500-foot buffer) but was documented at only one location in the project area: at the location of a tower footing removal site on Segment 2 (Figure 4.4-2). The amount of habitat present is negligible and would likely be avoidable by construction crews. If avoided, no impacts on the native community are anticipated.

Southern Coast Live Oak Riparian Forest plant community is documented at multiple locations and in all segments of the route (Figure 4.4-2). A number of towers and associated work areas, and sites of planned access road improvement would be located in this plant community on Segments 3A, 3B and 4. Multiple tower footing removal sites on Segments 1 and 2 are present in this woodland community. In total, less than seven acres of this natural community could be impacted at these sites. The CDFW considers several types of Coast Live Oak communities to be special status; however, because the Proponent's Environmental Assessment combined all of the Coast Live Oak community types under the more general "Coast Live Oak Woodland," this document cannot separate out the special status types and thus considers the entire group to be special status.

Southern Sycamore Alder Riparian Woodland plant community was not recorded during the applicant's field surveys; however, California sycamore (*Platanus racemosa*) was recorded, and a CNDDB record for this plant community is present at one tower footing removal site on Segment 2 (Figure 4.4-2). Analysis of aerial photographs indicates that this site is densely treed, and impacts on individual trees are possible.

Coastal Commission Environmentally Sensitive Habitat Areas in the proposed project include native plants and streams in the Coastal Zone (Segment 3A and portions of Segment 4; Figure 4.4-1). Temporary or permanent impacts on streams or native vegetation, including native oaks, in the Coastal Zone could occur during construction, including access road rehabilitation.

Implementation of APM BIO-1 (pre-construction surveys), APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-7 (SWPPP measures), APM AQ-1 (minimization of fugitive dust), and APM GEN-1 (Worker Environmental Awareness Plan) would partially reduce impacts on these special status plant communities, but not to less than significant levels. The incorporation of MM BIO-1 and MM BIO-3 through MM BIO-5 would reduce impacts on special status natural communities to levels that are less than significant. MM BIO-1 requires all project related construction activities, including ground disturbance, vehicle travel, and materials

storage, to be restricted to approved access roads and construction areas that are clearly indicated by stakes, flagging, and signage. This measure also requires sensitive resources such as waterbodies, special status natural communities, and special status plant sites to be clearly marked and avoided, unless previously approved. MM BIO-3 requires the applicant to develop a noxious and invasive species control plan that will aid with the restoration of natural plant communities. MM BIO-4 limits the removal of native vegetation and trees, and requires consultation with resource agencies to reduce impacts on special status natural communities. MM BIO-5 requires the applicant to develop a habitat restoration and monitoring plan prior to construction, and also mitigate for impacts on specific special status plant species and communities.

Operation Impacts

Operation and maintenance of the proposed project would involve periodic inspection of the subtransmission structures, conductors, telecommunications cables, and substation infrastructure. In addition, access and spur roads and areas around subtransmission structures would periodically be maintained (e.g., grading, vegetation removal) to enable safe access. Routine inspection activities would not impact special status natural communities, as vehicles would remain on approved access roads and previously disturbed work areas under normal circumstances. The magnitude of adverse impacts on special status natural communities during operations would be reduced to less than significant by complying with the conditions of applicable state and federal permits covering activities and by implementing the APMs and MMs described above, for the construction phase of the proposed project.

Impact BIO-3: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

LESS THAN SIGNIFICANT WITH MITIGATION

Fifteen streams and no wetlands were identified as jurisdictional during field surveys in project work areas (Table 4.4-4; Figure 4.4-1).

Direct impacts on wetlands and waterways as defined by Section 404 of the CWA may result from ground disturbance associated with installing or removing towers, constructing new access roads, and improving or widening existing access roads that are within hydrologic features (e.g., streams), particularly during the wet season or during rain events. Grading, excavation, placement of fill, and other ground disturbance in hydrologic features could result in impaired water quality in downstream locations during construction if water is present or after construction during a rain event. In such cases erosion and scour would increase turbidity and sediment loads. Direct impacts could also result from impaired water quality if hazardous materials (e.g., oil, diesel, hydraulic fluids) from project vehicles or equipment spilled directly into streams. Indirect impacts could result from ground disturbances, vegetation clearing, and hazardous materials spills in upland areas adjacent to hydrologic features. Clearing of vegetation in upland areas and hydrologic features could expose topsoil to weathering and erosion, which could result in increased turbidity and sediment loads in drainages during rain events. Hazardous materials located upslope could be transported into hydrologic features during rain events. Some beneficial impacts may be realized from the replacement/upgrading of existing degraded culverts and gabion walls in these areas, thus reducing hydrological interruption.

Table 4.4-4 Identified Jurisdictional Crossings in the Project Area

ID	Name	Project Segment	Description	Linear Feet	Waters of US (acres)	State Waters (acres)	Jurisdiction (USACE, CDFW, RWQCB)
1	Unnamed tributary to Franklin Creek	4	Ephemeral	0	0	0	Tbd
2	Unnamed tributary to Franklin Creek	4	Ephemeral	140	0.0090	0.0090	Tbd
3	Unnamed tributary to Franklin Creek	4	Ephemeral	50	0.0060	0.0502	Tbd
4	Franklin Creek	4	Ephemeral	24	0.0010	0.0495	Tbd
5	Unnamed tributary to Sutton Creek[1]	4	Ephemeral	50	0.0034	0.0901	Tbd
6	Unnamed tributary to Sutton Creek[1]	4	Ephemeral-Intermittent	31	0.0009	0.0955	Tbd
7	Sutton Creek[2]	4	Ephemeral-Intermittent	55	0.0198	0.0382	Tbd
8	Unnamed tributary to Carpinteria Creek[1]	4	Ephemeral	31	0.0032	0.0032	Tbd
9	Unnamed tributary to Carpinteria Creek[1]	4	Ephemeral	25	0.0030	0.0276	Tbd
10	Unnamed tributary to Carpinteria Creek[1]	4	Ephemeral	38	0.0030	0.0299	Tbd
11	Unnamed tributary to Carpinteria Creek[1]	4	Ephemeral	40	0.0047	0.0358	Tbd
12	Unnamed tributary to Los Sauces Creek	4	Ephemeral	50	0.0038	0.0638	Tbd
13	Unnamed tributary to Los Sauces Creek	4	Ephemeral	32	0.0028	0.0028	Tbd

Table 4.4-4 Identified Jurisdictional Crossings in the Project Area

ID	Name	Project Segment	Description	Linear Feet	Waters of US (acres)	State Waters (acres)	Jurisdiction (USACE, CDFW, RWQCB)
14	Unnamed tributary to East Casitas Pass Creek	4	Ephemeral	19	0.0029	0.0029	Tbd
15[3]	Casitas Creek	4	Ephemeral	Tbd	Tbd	Tbd	Tbd

Notes:
[1] Drains into NMFS-designated critical habitat for Southern California steelhead DPS
[2] NMFS-designated critical habitat for Southern California steelhead DPS
[3] This crossing was added to the project description after the preparation of the 2013 Jurisdictional Delineation. Therefore, confirmation and total extent of impacted jurisdictional waters has not been determined.
Key:
CDFW California Department of Fish and Wildlife
DPS distinct population segment
NMFS National Marine Fisheries Service
RWQCB Regional Water Quality Control Board
Tbd to be determined
USACE U.S. Army Corps of Engineers

Because the 15 identified streams are ephemeral (13) or intermittent (two), they are not likely to be wet at the time of construction. Nevertheless, excavation during road rehabilitation at these sites could be significant, and transport of sediments or hazardous materials downstream is a possibility. Driving numerous vehicles and heavy equipment on a dry stream bed may cause rutting and erosion. Because these crossings are mostly situated on steep slopes, any rain events would likely result in high water velocities capable of increased scour and could transport sediments or hazardous materials relatively far downstream. The work plans for the 15 streams are still being finalized.

Where avoidance of hydrologic features is not feasible and work is required within jurisdictional waters, the applicant would obtain and comply with all necessary USACE and CDFW permits under the CWA and CFGC Section 1600 regulations. While adherence to any applicable regulatory requirements would contribute to a reduction in impacts, the MMs below are proposed to reduce impacts to a less than significant level.

Impacts on federally and state protected wetlands would be partially reduced through compliance with the conditions of applicable state and federal permits covering activities in hydrologic features. The implementation of APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), APM BIO-7 (SWPPP measures), APM AQ-1 (minimization of fugitive dust), and APM GEN-1 (Worker Environmental Awareness Plan), designed to reduce impacts on native vegetation and habitats, would reduce impacts on streams but not to a level that is less than significant. Incorporation of MM BIO-1, MM BIO-3, MM BIO-4, and MM BIO-5, for impacts on native vegetation and habitats, will further reduce impacts. In general, these measures would reduce the extent of ground disturbance and aid with successful restoration and revegetation (with native plant species) of drainage features, reducing erosion issues in the future. By incorporating

MM BIO-8 (in-stream restrictions and a monitoring plan for jurisdictional streams), construction will avoid much of the wet season, thereby reducing the potential for erosion, turbidity, and increased sediment transport. The incorporation of the above MMs will reduce impacts on streams to a level that is less than significant.

Operations and Maintenance Impacts

Operation and maintenance of the proposed project would involve periodic inspection of the subtransmission structures, conductors, telecommunications cables, and substation infrastructure. In addition, access and spur roads and areas around subtransmission structures would periodically be maintained (e.g., grading, vegetation removal) to enable safe access. Normal inspection activities would have no impacts on hydrologic features, as vehicles would remain on approved previously disturbed areas outside of mapped wetlands and waterways. Long-term access and spur road maintenance may require the replacement of drains or other features that could affect federally protected aquatic features. Any such work would be permitted by the appropriate regulatory agencies (USACE, CDFW, and/or the appropriate RWQCB). The magnitude of adverse impacts on federally protected wetlands and waterways during operations would be reduced to less than significant by complying with the conditions of applicable state and federal permits covering activities in wetlands, and by implementing the APMs and MMs described above, for the construction phase of the proposed project.

Impact BIO-4: Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
LESS THAN SIGNIFICANT WITH MITIGATION

Construction Impacts

There are no known native wildlife nursery sites within the project area. The construction of the proposed project may interfere with the movement of wildlife on a local scale. In general, the proposed project would not substantially impede the movement of migratory species such as birds or large mammals, but would have impacts on fish movement. Interference with wildlife movement at the local scale is expected to be isolated and temporary with mitigation.

Impacts could occur on migratory fish populations at sites where in-stream work is planned. Road improvements are planned at 15 jurisdictional streams, including one in southern California steelhead DPS Critical Habitat (Sutton Canyon Creek on Segment 4). Fish that potentially use project stream crossings to migrate to other sections of these systems include steelhead and arroyo chub. Although water levels in project drainages vary greatly by season and are often completely dry for periods of the year, migration within these systems is possible under suitable conditions. Implementation of APM BIO-3 and APM GEN-1 would reduce impacts by providing biologists who would inspect for impacts on passing fish, such as being entrained, or blocked from passing. Additionally, APM BIO-7 (SWPPP measures) would protect stream habitat. Incorporation of MM BIO-1 through MM BIO-7, described above, for impacts on special status species, would further reduce impacts on migratory fish. In addition, by incorporating MM BIO-8 (in-stream restrictions), construction will avoid wetted conditions when fish migration would occur, thereby reducing impacts to a level that is less than significant.

At the regional scale, the project area is located in the Pacific Flyway and provides suitable foraging habitat for many resident and migratory avian species. The installation of marker balls on conductor may be recommended by the Federal Aviation Administration, which could result in

disruption of migration patterns. The proposed project will adhere to recommendations in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012; see Section 2.2.1.6 of the Project Description), which would partially reduce impacts but not to a level less than significant. The implementation of MM BIO-7 would reduce impacts in the Pacific Flyway by constraining night lighting, and the implementation of MM BIO-11 would require an avian protection plan; together these would reduce impacts to a level that is less than significant.

Operation Impacts

Operations-related activities may cause native resident or migratory wildlife species to temporarily displace due to noise or human activities. This may affect wildlife movements in known migratory corridors and may affect the movement of native resident wildlife species. These impacts are expected to be isolated and temporary and, therefore, locally adverse but minor. The infrequent nature of operations-related activities would result in less than significant impacts from operation of the proposed project.

Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
LESS THAN SIGNIFICANT IMPACT WITH MITIGATION

Construction Impacts

Construction activities or access road improvements proposed in Segment 1, 3B, and 4 would require the trimming or removal of trees protected by Santa Barbara or Ventura County. Impacts would occur on a maximum of 139 protected trees at construction sites or associated with access roads, based on the 60% design (BioResource Consultants, Inc. 2013b). Coast live oak and California black walnut are the protected species that would be impacted. Eight protected trees were observed in impact areas in the Santa Barbara County Coastal Zone.

The proposed project would carry out tree trimming and removal activities in accordance with applicable county regulations and the terms of any applicable permits. Implementation of APM BIO-1 (pre-construction surveys), APM BIO-2 (minimize impacts on vegetation), APM BIO-3 (biological monitoring), and APM GEN-1 (Worker Environmental Awareness Plan), designed to reduce impacts on native vegetation and habitats, would reduce impacts on trees, but not to a level that is less than significant. Incorporation of MM BIO-1 through MM BIO-5, designed to reduce impacts on native vegetation and special status species, including trees and special status natural communities (Table 4.4-3), would reduce impacts on trees to a level that is less than significant. By incorporating the measures described above, the proposed project would not conflict with local policies or ordinances protecting biological resources, including tree preservation policies or ordinances.

Operation

Operation of the proposed project would require periodic maintenance of access and spur roads and areas around subtransmission structures. This periodic maintenance may require trimming of protected trees to ensure safe operation of the subtransmission lines and to ensure access for routine and emergency maintenance. This maintenance work would be conducted consistent with CPUC GO 95, Rule 35 and California Public Resources Code Sections 4292 and 4293. Additionally, implementation of APM BIO-1 through APM BIO-3 and APM GEN-1, designed to reduce impacts on native vegetation and habitats, would reduce impacts on trees, but not to a level that is less than significant. Incorporation of MM BIO-1 through MM BIO-5, designed to reduce impacts on trees and

sensitive natural woodland communities, would reduce impacts on trees to a level that is less than significant. By incorporating the mitigation measure described above, the proposed project would not conflict with local policies or ordinances protecting biological resources, including tree preservation policies or ordinances.

4.4.5 Mitigation Measures

MM BIO-1: Limits of Construction Activities: Project Boundaries and Sensitive Areas Clearly Marked. In all locations of the project, construction activities, vehicular traffic (including movement of all equipment), and storage of construction materials will be restricted to approved access roads and established construction areas indicated by flagging, fencing, and/or signage. The applicant will ensure that exclusionary fencing is installed prior to the start of construction activities around laydown/work and staging areas, where necessary, to prevent inadvertent encroachment into the native habitat adjacent to areas of impact. Identified sensitive resources such as hydrologic features, special status plants and natural communities, and known wildlife habitat (e.g., nests, burrows, dens, middens) will be assigned a buffer as appropriate and clearly marked (e.g., with signs, flagging, ropes, and/or fencing) and avoided unless previously approved. A CPUC-approved qualified biologist will propose a buffer distance to the CPUC, and the CPUC will determine the need for consultation with appropriate resource agency (ies). The CPUC-approved qualified biologist will perform or supervise flagging and fencing to ensure that these activities are conducted without harm to sensitive species or habitat.

MM BIO-2: Pre-construction Survey Timing and Location Stipulations. Pre-construction surveys for special status plant and wildlife species will be conducted in all access, laydown/work, and staging areas where suitable habitat is present, including all tower installation sites, existing and proposed access roads, staging areas, and tower footing removal sites. Pre-construction surveys will not include searches for special status fish. Rather, fish presence will be assumed at the locations described in this analysis, and CPUC-approved biological monitors would record any loss, injury, or other interactions with special status fish (as required in APM BIO-3).

Additionally, a CPUC-approved qualified biologist will conduct pre-construction clearance sweeps for special status species at all access, staging, and laydown/work areas where suitable habitat is present within approximately 24 hours of construction activities each day.

If a special status species is found at any time, the CPUC-approved biologist will contact the appropriate wildlife agency(ies), in addition to the CPUC, within 48 hours.

MM BIO-3: Noxious and Invasive Weed Control Plan. Prior to construction, the applicant will submit a Noxious and Invasive Weed Control Plan that is to be implemented before, during, and after construction and restoration of the proposed project. The final Noxious and Invasive Weed Control Plan shall be implemented, as specified, throughout construction and restoration. This plan will include measures designed to avoid the introduction and spread of noxious weeds and invasive plant species designated by the state, the counties, or local weed control boards. At a minimum, this plan will include the following measures:

- Pre-construction surveys for special status plant species (APM BIO-1 and MM BIO-2) will include surveys for state- and county-designated noxious weed species. The applicant will coordinate with the appropriate agencies, including the CPUC, to determine appropriate

species-specific measures to implement, or whether control or treatment of a species is feasible.

- If an invasive weed species is present at a given site, soils excavated from this location for use in construction and restoration activities (e.g., backfilling, road rehabilitation, etc.) will not be transported to a location that does not already contain the said invasive species.
- All vehicles and equipment will be cleaned off site prior to initial arrival at the project.
- Crews, with construction inspector oversight, will ensure that vehicles and equipment are free of soil and debris capable of transporting noxious weed seeds, roots, or rhizomes before the vehicles and equipment are allowed use of access roads.
- Vehicle and equipment wash stations (mobile or built in place) will be erected at strategic locations on the right-of-way where designated weed species have been detected, and where doing so would help prevent the spread of these species.
- Straw, hay, gravel, soil, or other construction materials that could inadvertently contain unwanted plant propagules will come from state-cleared sources that are free of invasive weeds.
- All seeds to be used in revegetation and reclamation activities will come from weed-free sources.
- All temporary disturbance areas not subject to existing infestations of invasive plants, including access roads, transmission line corridors, and towers, will be monitored for invasive species establishment on a quarterly basis for at least one year after project construction and restoration is completed. If evidence of invasive species introduction is found, the applicant will coordinate with appropriate agencies, including the CPUC, to determine appropriate species-specific measures to implement.
- This plan will be developed in consultation with resource agencies (CDFW, Santa Barbara and Ventura Counties, CPUC, as appropriate) and will be provided to these agencies for review and comment six months prior to the start of construction, with the intent to produce a final draft of the plan no later than two months prior to the start of construction.

MM BIO-4: Limit Removal of Native Plants, Trees, and Natural Communities.

- Temporary construction areas will be impacted in such a way that facilitates post-construction restoration. For example, drive-and-crush methods in areas with native vegetation will be employed where possible.
- The applicant will consult with a qualified arborist for the trimming and removal of all native vegetation. The applicant will work with the qualified arborist to determine the minimum amount of vegetation removal required to accommodate project construction and restoration, as well as the correct trimming procedures to employ.
- The applicant will consult with the appropriate agency, including the CPUC, and will adhere to any regulations and permit conditions for the following impacts:
  - Impacts on Critical Habitat.
  - Impacts on ESHAs in the Coastal Zone.
  - Impacts on special status natural communities, including riparian communities, southern California black walnut woodland, southern coast live oak riparian forest, and southern sycamore alder riparian woodland.

MM BIO-5: Habitat Restoration and Mitigation.

- The applicant will ensure that all areas that are temporarily impacted are restored as closely to pre-construction conditions as possible. Alternatively, areas that do not provide habitat to special status species or sensitive resources may be restored to the conditions agreed upon between the landowner and the applicant.
- Prior to construction, the applicant will submit a Habitat Restoration and Mitigation Plan to address areas of habitat loss to be restored or mitigated (for disturbances to jurisdictional features, see MM BIO-7). This plan will be developed in consultation with resource agencies (NMFS, USFWS, CDFW, Santa Barbara and Ventura Counties, CPUC, as appropriate) and will be provided to these agencies for review and comment six months prior to the start of construction, with the intent to produce a final draft of the plan no later than two months prior to the start of construction.
- The plan will include details, including but not limited to, topsoil segregation and conservation; vegetation treatment and removal; revegetation methods, including seed mixes, rates, and transplants; criteria to monitor and evaluate revegetation success; and compensation and remedial measures to be implemented as needed.
- All disturbances to special status plants, county-protected trees, and special status natural communities will be restored or mitigated, and the plan will specify how each type will be addressed in terms of the above restoration details and/or other mitigation. For special status plant species, such as Santa Barbara honeysuckle or Nuttall's scrub oak, or special status natural communities in which mitigation requirements may not be specified through permits, restoration will occur after construction at a level of 1:1. This will be completed through one of the following methods:
  - Establishing the species/natural community habitat within the proposed project areas (onsite);
  - Establishing the species/natural community habitat outside the proposed project areas (offsite); or
  - Purchasing credits and/or mitigation lands at an entity approved by CDFW.

  For Options 1 and 2 (onsite and offsite), post-construction monitoring will be performed for one to five years, depending on the disturbance level and restoration level, and the success criteria will be specified in the plan.

MM BIO-6: Wildlife Protection. To prevent entrapment of wildlife, all steep-walled trenches, auger holes, or other excavations will be covered at the end of each day. Fencing will be maintained around the covered excavations at night. For any open excavations, earthen escape ramps will be maintained. A CPUC-approved biological monitor will inspect all trenches, auger holes, or other excavations a minimum of twice per day during non-summer months and a minimum of three times per day during the summer (hotter) months, and also immediately prior to back-filling. Any wildlife species found will be safely removed and relocated out of harm's by a CPUC-approved biological monitor, using suitable tools such as a pool net when applicable. For safety reasons, biological monitors will under no circumstance enter open excavations.

Measures will be taken to prevent impacts from project-related trash. All trash, including decomposable food scraps, will be stored in sturdy, animal-proof containers, and emptied regularly. All project construction vehicles will be equipped with trash bags.

MM BIO-7: Night Lighting. Night lighting for construction and restoration use, such as to illuminate staging areas, may be used from dusk to dawn. All lighting will be shielded and directed downward to minimize the potential for glare or spillover onto adjacent properties and to reduce impacts on local wildlife. The applicant will indicate anticipated measures to resource agencies and the CPUC for approval prior to construction. The approved measures will be provided to the CPUC.

MM BIO-8: Impact Reduction on Hydrologic Features and Aquatic Habitat. Prior to project construction for all proposed project components in the vicinity of hydrologic features, the applicant will:

- Ensure that CPUC-approved biological monitors will establish and maintain a minimum exclusionary buffer of 50 feet from the delineated extent of all jurisdictional features during construction and restoration. If the applicant cannot maintain the 50 foot exclusionary buffer from the delineated bed/bank of a drainage feature during project construction and restoration, the applicant will obtain all necessary permits from appropriate agencies (USFWS, NMFS, CDFW, USACE, CPUC, County, as appropriate); will provide standard SWPPP BMP measures to prevent any solid or liquid materials from entering the drainage; and the applicant will submit proposed measures to CPUC for approval prior to construction. Measures should include information on crossing streams on road beds. Vehicle or equipment travel and construction or restoration of any proposed project component that requires altering, removing, or filling the bed or bank of seasonal drainages or other jurisdictional or potentially jurisdictional water features will be performed only when water is not present in the feature, unless otherwise permitted by agencies (USFWS, NMFS, CDFW, USACE, CPUC, and County as appropriate).
- Prior to construction. the applicant will submit a Hydrologic Features Mitigation Monitoring Plan for affected hydrologic features in consultation with resource agencies (USFWS, NMFS, CDFW, USACE, Santa Barbara County, CPUC, as appropriate) and will provide to these agencies for review and comment four months prior to the start of construction, with the intent to produce a final draft of the plan no later than one months prior to the start of construction.
- The plan will provide measures to accomplish restoration, criteria for restoration success, a post-construction monitoring schedule, and compensation ratios for impacted jurisdictional areas.

MM BIO-9: California Red-Legged Frog Impact Reduction Measures. To reduce impacts on California red-legged frog, the following measures will be implemented:

- A CPUC-approved qualified biologist will conduct habitat assessment surveys in accordance with the most recent USFWS protocol (e.g., USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog, August 2005) for California red-legged frog at all jurisdictional drainage features that would be impacted in project area prior to construction (Table 4.4-4).
- In areas where suitable habitat is determined to be present, pre-construction surveys in accordance with the most recent USFWS protocol (e.g., USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog August 2005) for the California red-legged frog will be conducted to determine presence in the vicinity of the project area.

- If this species is identified in the project area at any time, the USFWS, CDFW, and CPUC will be notified within 48 hours and the applicant will consult with these agencies to determine the appropriate next steps.

MM BIO-10: Nesting Bird Management Plan. Prior to construction, the applicant will submit a project-specific Nesting Bird Management Plan in consultation with the USFWS, CDFW, and CPUC which provides measures and an adaptive management program designed to avoid or reduce impacts on special-status and MBTA-protected bird species during nesting periods. The final Nesting Bird Management Plan shall be implemented, as specified, throughout construction and restoration. This plan will include the following information:

- Appropriate survey timing, extents, and methods; approved nest deterrent methods, including areas where vegetation will be cleared for the purpose of deterring nesting; inactive nest management; monitoring and reporting protocols during construction; protocol for determining whether a nest is active; protocol for documenting, reporting, and protecting active nests within construction and restoration areas. If pre-construction survey protocols exist for a certain species, the plan will outline the implementation of these protocols.
- Appropriate and effective buffer distances, including horizontal buffers from nests, horizontal buffers from territories if appropriate, and vertical buffers for helicopters. Buffers will not be based on generalized assumptions regarding all nesting birds, but will be site- and species/guild-specific and account for specific, stage of nesting cycle, and construction work type.
- During construction and restoration, a CPUC-approved avian biologist will implement the appropriate buffer distance in accordance with the Nesting Bird Management Plan.
- A process for a reduction from the plan's nesting buffer distances. Buffer reductions for special-status species and raptors must be approved by appropriate wildlife agencies and the CPUC. Buffer reductions for common species must be approved by the CPUC.
- The minimum requirements to become a CPUC-approved avian biologist and biological monitor for nesting birds, including education, experience in conducting biological surveys, and experience with specific birds in the project area.
- The CPUC-approved biological monitor will halt work if it is determined that active nesting would be disturbed by construction or restoration activities until further direction or approval to work is obtained from the CPUC and/or appropriate wildlife agencies.

The plan will be submitted to the wildlife agencies and the CPUC for review and comment four months prior to construction and finalized no less than one month prior to the start of construction.

MM BIO-11: Avian Protection Plans. At least three months prior to construction, the applicant will submit an avian protection plan in accordance with Avian Protection Plan Guidelines (APLIC and USFWS 2005). The final avian protection plan shall be implemented, as specified, throughout construction and restoration. The avian protection plan will include provisions to reduce impacts on avian species during construction, restoration, and operation of the proposed project, and will provide for the adaptive management of project-related issues. The avian protection plans will be reviewed and approved by the CDFW, USFWS, and CPUC prior to construction.

MM BIO-12: Burrowing Owl Impact Reduction Measures. To further reduce impacts on burrowing owls, the following measures will be implemented:

- A CPUC-approved qualified biologist familiar with burrowing owl biology and survey methods will conduct pre-construction surveys for this species.
- Surveys for burrowing owls will be conducted no more than 30 days prior to construction activities during the non-breeding season and no more than 14 days prior to construction in the breeding season, to confirm whether burrowing owls occupy the site, and if so, whether the owls are actively nesting. Surveys will be done throughout the project areas of potential effect, plus an additional area extending 300 feet from the proposed project's boundaries.
- If an occupied burrow is identified, buffer distances prescribed by the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012 or more recent) will be implemented.
- If preconstruction surveys identify a burrowing owl then the applicant will submit a Burrowing Owl Compensation Plan in consultation with appropriate wildlife agencies and the CPUC that is consistent with mitigation guidelines as outlined in the Staff Report on Burrowing Owl Mitigation (CDFG 2012 or more recent) prior to construction. The final Burrowing Owl Compensation Plan shall be implemented, as specified, throughout construction and restoration. The plan will describe the compensatory measures that will be undertaken to address the loss of burrowing owl burrows within the project area. This will include mitigation for permanent impacts on nesting, occupied and satellite burrows and occupied burrowing owl habitat with (a) permanent conservation of similar vegetation communities comparable to or better than that of the impact area, and (b) sufficiently large acreage, and presence of fossorial mammals.
- The CPUC-approved qualified biologist will report all project-related burrowing owl injuries or mortalities to CDFW and the CPUC within 12 hours of discovery and will follow CDFW's recommended actions.

MM BIO-13: Southwestern Willow Flycatcher and Least Bell's Vireo Impacts Reduction Measures. To reduce impacts on southwestern willow flycatcher, the following measures will be implemented:

- A CPUC-approved qualified biologist will conduct habitat assessment surveys for southwestern willow flycatcher and least Bell's vireo at all jurisdictional drainage features that would be impacted in project area (Table 4.4-4). In addition, habitat assessments should be conducted at any other drainage where construction activities (e.g., overhead stringing by helicopter) could impact this species, including the section of Ventura River that is spanned by the project.
- In areas where suitable habitat is determined to be present, pre-construction nesting season surveys following the most recent USFWS protocol for the southwestern willow flycatcher and least Bell's vireo will be conducted to determine presence in the vicinity of the project area.
- If either species is found to actively nest in the project area, the USFWS, CDFW, and CPUC will be notified within 48 hours of nesting or territory confirmation. In the event that a southwest willow flycatcher or least Bell's vireo individual or nest is observed, biologists will establish and maintain an exclusionary buffer as specified in the Nesting Bird Management Plan (MM BIO-10).

MM BIO-14: Ringtail and American Badger Impacts Reduction Measures. To reduce impacts on ringtail and American badger, the following measures will be implemented:

- If occupied ringtail dens or badger burrows are observed during pre-construction surveys or sweeps a CPUC-approved qualified biologist will recommend an appropriate buffer distance around the den or burrow to the CPUC. Once the distance is approved by the CPUC, the biologist will demarcate the disturbance buffer and construction activities will be restricted within the buffer.
- CPUC-approved qualified biologists will be notified if ringtails or badgers are observed within the project area during construction activities. Work will immediately be stopped in the area if the CPUC-approved qualified biologists find an occupied den or burrow within 100 feet of construction activities. Work can resume once the den or burrow is confirmed to be unoccupied by a CPUC-approved qualified biologist or an appropriate buffer is approved by the CPUC and implemented.
- If badger burrows cannot be avoided, a CPUC-approved qualified biologist will ensure passive relocation of the occupants by installing one-way trap doors on the burrow. The burrow will be collapsed after the badger vacates.
- During the spring months when young may be present in burrows, burrows must be checked for young before installation of the one-way trap door. If young are present during relocation efforts, all work will stop within 100 feet of the burrow until the young have left the burrows within the project area.
- If ringtail dens cannot be avoided, the applicant will consult the appropriate agencies (CDFW, CPUC) to determine an appropriate course of action, including potential passive relocation or other measures.
- Prior to any relocation efforts, the applicant will obtain specific approval from the appropriate agencies (CDFW, CPUC).

4.5 Cultural Resources

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to cultural resources. For the purpose of analysis in this section, the term, "cultural resources" encompasses historical resources; archeological resources (which may be historic or prehistoric, and are a subset of historical resources); Native American resources; and paleontological resources. The applicant's Cultural Resources Technical Report and supplemental survey information are included in Appendix I.

Below are definitions of key cultural and paleontological resources terms used in this section:

Historical Resources

Historical resources, as defined by the California Environmental Quality Act (CEQA), are resources that are listed in, or are determined to be eligible for listing in, the California Register of Historical Resources (CRHR) or a local register, or that are otherwise determined to be historical pursuant to the CEQA Statute or Guidelines (Public Resources Code [PRC] Section 21084.1 or California Code of Regulations [CCR] Section 15064.5). A historical resource may be any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in terms of California's architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural records. Typically, historical resources are more than 50 years old.

Archaeological Resources

As stated above, archaeological resources are a subset of the historical resources category. Archaeological sites may be considered historical resources. If not, archaeological resources may be determined to be "unique" as defined by the CEQA Statute (Section 21083.2). A unique archaeological resource is an artifact, object, or site that: (1) contains information (for which there is a demonstrable public interest) needed to answer important scientific research questions; (2) has a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person. Non-unique archaeological resources are not typically addressed in Environmental Impact Reports (EIRs).

Native American Resources

Native American resources are cultural resources such as archaeological resources, rock art, and the prominent topographical areas, features, habitats, plants, animals, or minerals that contemporary Native Americans value and consider essential for the preservation of their traditions. Traditional culture often prohibits Native Americans from sharing the locations of these cultural resources with the public.

Paleontological Resources

For the purpose of this EIR, "paleontological resources" refers to the fossilized plant and animal remains of prehistoric species. They are valued for the information they yield about the history of the earth and its past ecological settings. Paleontological resources represent a limited, non-renewable, impact-sensitive, scientific, and educational resource. Fossil remains such as bones,

teeth, shells, and leaves are found in geologic deposits (i.e., rock formations). Paleontological resources generally include the geologic formations and localities in which the fossils are collected.

4.5.1 Environmental Setting

4.5.1.1 Historic, Archaeological, and Native America Resources

Prehistoric, Ethnohistoric, and Historic Background

Information presented in this section was gathered from a review of the cultural resources technical reports that have been prepared for the proposed project (Switalski and Bardsley 2012a, 2012b; Schmidt 2013); Proponent's Environmental Assessment (PEA) documents (SCE 2012); Department of Parks and Recreation site and isolate forms; Native American consultations; and a Paleontological Resources Assessment (SDG&E 2010c).

Prehistoric

Prehistoric archaeology covers the period of time before written record; in the Santa Barbara County and Ventura County regions, this is the time before European exploration and colonization. The prehistoric period is generally divided into four periods: Paleoindian, Early, Middle, and Late. The Paleoindian period begins with the arrival of humans in the area. The Santa Barbara area, particularly the Channel Islands, figures prominently in current research on the timing and nature of human movement into the area, as evidenced by Early assemblages, many with stemmed points and crescentics (flaked crescent-shaped artifacts) dating perhaps as early as 13,000 years B.P. (Erlandson and Braje 2011). Materials found on Channel Island and early mainland sites establish a firm marine orientation for these early people. Sparse evidence of visits by the Clovis people to the coast is found in the form of a few distinctive fluted points. Clovis artifacts were long thought by archaeologists to be the oldest material in North America, but it is now known that the coastal adaptations predate Clovis.

The Early period, dating from about 8,000 before present (BP) to about 3,350 BP, represents adaptation to the coast during the warmer and drier conditions that followed the Pleistocene. Milling stones, a type of food processing equipment, are a large part of this adaptation, and the collection of marine shellfish was important as well. Some pithouses are found from Early period sites, and mortars and pestles for pulverizing seeds are found late in the Early period (Neusius and Gross 2013:206).

During the Middle period an emphasis on hunting of terrestrial mammals and a continued use of shellfish developed. Fishing, which is documented in the earliest sites in the Channel Islands, became more important. Trade in commodities such as shell beads, steatite (soapstone), and obsidian or volcanic glass, became important (Neusius and Gross 2013:208).

In the Late period there is evidence of population growth, development of social inequality, and complex organization. Although there are suggestions that they date to earlier times, there is good evidence of the use of plank canoes during the Late period. Subsistence along the Pacific Coast included a heavy emphasis on marine resources, including both fish and marine mammals (Neusius and Gross 2013:208–211). The complexity noted among the ethnographic Chumash is well established in the Late period.

Ethnohistoric

The Ethnohistoric period is the time for which historical accounts from explorers, missionaries, soldiers, and settlers are available for the Native American populations. The proposed project would cross lands associated with both the Ventureño and Barbareño Chumash groups. The Chumash people lived in the Santa Barbara and Ventura areas when the explorers and missionaries first came to California. These groups draw their names from the Spanish missions established in their areas, San Buenaventura (1782) and Santa Barbara (1786) (Grant 1978a:Fig. 1, Grant 1978b:505). The Chumash were complex hunter-gatherers with evidence of hereditary leadership, ownership of resources, social inequality (a class structure), and large semi-sedentary to sedentary villages. The larger Chumash territory included the four northern Channel Islands, and trade with the islands using the plank canoe was important (Neusius and Gross 2013:210–211).

The Chumash were a focus of Spanish missionization activities, with many individuals becoming assimilated into the mission culture. As a result, many Native Americans were overlooked when reservations were being established and are not federally recognized. The Santa Ynez Reservation in Santa Barbara County is home to the federally recognized Santa Ynez Band of Chumash, and Chumash descendants are enrolled with the federally recognized Tejon Indian Tribe of California. There are a number of Chumash groups still seeking federal recognition. Consultation with descendants is discussed in Section 4.5.1.4.

Historic

Technically, the Historic era begins with the exploration of California, starting in 1542 with João Rodrigues Cabrilho (more commonly known as Juan Rodriguez Cabrillo) (Neusius and Gross 2013:218), although sustained contact did not occur until the establishment of the Spanish Mission system in 1769. The Chumash were brought into the mission system, where they were taught Christianity and became part of the economic system of the missions. They were responsible for constructing the buildings of the missions, raising the crops and tending the herds, and participating in trades. The Spanish also built military forts or presidios, the closest of which to the proposed project area is the Santa Barbara Presidio.

In 1821, Mexico won its independence from Spain. The missions continued to function for a time, but eventually their land was stripped away and the system ceased to function. Under Mexican rule, large tracts of land were granted to individuals as ranchos. Cattle raising, which had begun in mission times, became the economic engine of the area. Hides and tallow were exported in large quantities.

Following the Mexican-American War (1846–1848), California came under American rule, becoming a state in 1850. The area developed as rural, agricultural land. Oil extraction was another important economic activity. The towns that grew up around Mission Buenaventura and the Santa Barbara Mission and Presidio continued grow and are now the regional population centers. The area traversed by the proposed project continues to be rural.

Historic, Archaeological, and Native America Literature and Records Search

Cultural resource surveys for the proposed project included record searches conducted at the South Central Coastal Information Center, located at California State University, Fullerton on February 27, 2012, and at the Central Coast Information Center, located at the University of California, Santa Barbara on March 1, 2012 (Switalski and Bardsley 2012a, 2012b). The purpose of the records search was to determine the extent of previous investigations within 0.5 miles of the

subtransmission corridor and to determine whether previously documented prehistoric or historic archaeological sites, isolated findings, architectural resources, cultural landscapes, or ethnic resources exist within the project area. The reviewed documentation included survey and evaluation reports, archaeological site records, historic maps, the California Points of Historical Interest, the California Historical Landmarks, the CRHR, the National Register of Historic Places (NRHP), and the California State Historic Resources Inventory listings.

The results of the records search indicated that 13 cultural resource studies have been previously conducted within portions of the project area (Table 4.5-1), including one study conducted for the proposed project that occurred directly within the alignment of Segments 3A, 3B, and 4 (Schmidt 2006). An additional 54 studies have been conducted within 0.5 miles of the project area.

Table 4.5-1 Cultural Resources Studies Previously Conducted within the Project Area

Segment	Author	Year	Results	Report Number
1	Chambers Group	1982	Positive	VN-00421
1	Foster et al.	1989	Positive	VN-00731
1	NCPA	1989	Positive	VN-00773
1	Singer, C.	1986	Negative	VN-00494
1, 2	Fleagle, D.	1998	Positive	VN-01675
3A	Santoro, L., and G. Toren	1992	Negative	SR-1288
3A	Schmidt, J.	2005	Negative	-
3A	Wilcoxon, L.	1976	Positive	SR-0850
3A, 3B	Waldron, W.	1986	Positive	SR-1154
3A, 4	Maki, M.	2000	Positive	SR-2573
4	Maki, M.	2002	Positive	SR-2848
4	Schmidt, J.	2006	Negative	-
3B, 4	Wlodarski, R.	2008	Positive	VN-02791

Five previously documented cultural resources are believed to be present within the survey area: CA-VEN-979, 56-100200, CA-VEN-1109H, CA-SBA-107, and CA-SBA-3814. These resources are described in Section 4.5.1.3, Survey. In addition, 33 previously documented cultural resources have been identified within 0.5 miles of the project area.

Historic, Archaeological, and Native America Surveys

Three Historic, Archaeological, and Native America Resources surveys were conducted for the proposed project. The methods for these surveys are summarized below.

Methods

The first Historic, Archaeological, and Native America Resources survey was a pedestrian survey of most of the project area and was conducted between March 12 and April 5, 2012 (the Main Survey). Due to the mountainous terrain, dense vegetation, and limited access throughout much of the project area, a survey of the entire alignment was not possible. Each tower surveyed was approached by foot from the nearest point of access, generally SCE access roads, ranch roads, or private access roads. Due to the varying degree of slope, terrain, access constraints, and variety of existing roads (paved, dirt, gravel), survey crews employed different methods for surveying different road segments, as described in Table 4.5-3.

Table 4.5-3 Survey Methodology Used for Access Roads within the Project Area

Survey Category	Description	Potential Impact	Survey Methodology	Length
I	Existing paved or gravel roads. Roads located on steep (>30°) slope, and existing private roadways, such as driveways near private residences.	No or very little impact	As determined using the surveyors' professional judgment, spot checks were conducted at locations along routes and areas that could potentially yield archaeological resources, or areas where resources were previously identified/recorded. Very limited survey coverage.	10.8 miles (130 acres)
II	Ranch/orchard roads within citrus/avocado orchards or ranches. Moderately disturbed.	Moderate impact within an already disturbed context	As determined using the surveyors' professional judgment, more frequent spot checks (20- to 25-meter transects) along routes that could yield resources associated with ranching/ farming or previously identified/recorded resources. Moderate survey coverage.	36.7 miles (437 acres)
III	Roads proposed for construction, roads near existing waterways, and roads that appear to intersect areas with no or very little previous disturbance.	Potentially high impact to areas with little or no previous disturbance	Complete 100% pedestrian survey with 10- to 15-meter transects.	23.9 miles (285 acres)

Each accessible structure location, 60.6 linear miles of access roads, and approximately 9 miles of the subtransmission corridor were inventoried for cultural resources. The Main Survey included a 100-foot-wide buffer on either side of the centerline of the subtransmission line corridor; a 100-foot radius around each structure; and a 33-foot buffer on either side of the proposed and existing access roads. Survey crews conducted a limited inventory of an additional 10.8 miles of access roads that were either paved or located on very steep slopes (Survey Category I). Twenty-one structure locations, 9.1 miles of access roads, and approximately 24 miles of the subtransmission corridor were not inventoried due to inaccessible terrain, washed out access roads, or access restrictions from private landowners. Three new resources were identified during this survey and are listed in Table 4.5-4 and discussed further below.

The second survey included portions of the project area located within the Los Padres National Forest that could not be surveyed until a permit was obtained and was conducted on July 23, 2012 (Switalski and Bardsley 2012b). It included the three pole locations within the forest, along with a 100-foot radius around each of the three poles, to the extent possible, given slope and vegetation considerations. The spans between poles and many of the proposed access roads were judged by the surveyors to be too steep or too thickly vegetated to access. Of the 14.4 acres of the project area located in Los Padres National Forest, 2.7 acres were surveyed, and the remaining 11.7 acres were not, due to slope and vegetation issues. No new resources were identified during this survey.

The third survey was conducted on March 18 and 19, 2013; however, the project design has since been modified, and the area surveyed has been eliminated from the project site. Therefore, the results on this survey effort are not discussed further.

During the Main Survey, an attempt was made to find each of the five previously documented cultural resources sites that were identified as being on or near the survey area. Table 4.5-4 lists the new resources and those originally recorded within the project area covered by the Main Survey.

Table 4.5-4 Cultural Resource Sites Recorded at Tower Sites or on Access Roads

Segment	Trinomial/ Temporary	Primary	Component	Description	Comments
1	CA-VEN-979	56-000979	Prehistoric	Lithic Deposit	Site is currently destroyed
1	N/A	56-100200	Prehistoric	Pestle (Isolate)	Isolate was not relocated
1	CA-VEN-58		Prehistoric	Large habitation site with burials	Appears to be eligible for the CRHR. No project components would be sited within the area; however, Segment 1 would span within less than a half mile of the site.
1	SCE-Bonsall#1	N/A	Prehistoric	Large artifact scatter	Appears to be eligible for the CRHR. No project components would be sited within the area; however, Segment 1 would span within less than a half mile of the site.
2	CA-VEN- 1109H	56-001109	Historic	Railroad	Resource has been destroyed
4	SBCRP-1[1]	N/A	Historic	Culvert	Ineligible for CRHR
4	SBCRP-2[1]	N/A	Historic	Retaining Wall	Ineligible for CRHR
4	SBCRP-3[1]	N/A	Historic	Santa Clara-Ojai-Santa Barbara 66 kV Subtransmission Line structures	Requires formal evaluation for eligibility for CRHR
4	CA-SBA-107	42-000107	Prehistoric	Rock Shelters	Determined to be located outside of project area
4	CA-SBA-3814	42-003814	Prehistoric	Lithic Scatter	Determined to be located outside of project area

Note:
[1] Newly Recorded Resource

66-kV Subtransmission Lines

Segment 1

Survey crews inventoried the area around each tower location in Segment 1. The topography along the alignment was dominated by steep hillsides intersected by ravines and gullies, and each structure was generally situated in an area that was mechanically disturbed and leveled with vegetation cleared for maintenance access. The additional access road survey on the Bonsall property is also part of Segment 1.

CA-VEN-979. Site CA-VEN-979 was originally documented as a small lithic scatter[1] with two unidentified bone fragments located on top of a ridge approximately 66 feet (20 meters) from a subtransmission structure location. The current survey did not identify any artifacts that were reported on the original site record, despite the fact that the survey crews were able to match existing features in the vicinity of the mapped location (such as fence lines, gates, and transmission towers) with features depicted on the original site map. Several dirt roads were observed within and adjacent to the site, and the original recorders noted heavy impacts by road maintenance, cattle trails, and barbed wire (Schmidt and Wishner 1988). Given the site's location and the presence of at least four dirt roads in the area, it appears that the site may have been altered due to grading and/or ranching activities. As the resource appears to be destroyed, it is not eligible for listing in the CRHR.

P-56-100200. Site P-56-100200 was originally recorded as an isolated pestle. The isolate was not relocated during the survey, and no other cultural material was identified within the vicinity of its plotted location. Isolates are not considered significant under CEQA because their context and integrity are limited and because their research potential is exhausted through detailed recording. Therefore, isolates (including P-56-100200) are not considered further in this CEQA review and are not included in the impact analysis.

CA-VEN-58. Recorded first in 1949, this site was subjected to professional excavation in the early 1960s (Greenwood and Browne 1963). The excavations demonstrated that the site yielded a diversity of materials and contained at least four human burials. Although much of the subsurface soil at the site had been disturbed by plowing, undisturbed soils were also present. CA-VEN-58 was not formally evaluated for eligibility for the CRHR, but based on the diversity of material recovered and the presence of human remains, it almost certainly is eligible. It is outside the alignment for Segment 1 and would not be subjected to impacts from the proposed project.

SCE-Bonsall#1. This newly discovered site is described as containing "constituents similar to those found at CA-VEN-58" (Schmidt 2013:11). Subsurface depth of deposits was not determined in the field, and it was noted that there was no surface indication of human burials. The site is located outside the alignment of Segment 1 and would not be subjected to impacts from the proposed project.

Segment 2

Four tower locations were inventoried between Santa Ana Road and Casitas Vista Road, and two additional tower locations were examined just west of Casitas Vista Road. Three tower locations were also approached from the western end of Segment 2. Each tower examined is located in a

[1] *Lithic scatter* refers to a surface scatter of cultural artifacts and debris that consists entirely of stone items, stone tools, and chipped stone debris.

mechanically altered terrain, with leveled ridge tops and vegetation cleared to facilitate easy access. Overall, nine tower locations situated directly south of Lake Casitas were not inventoried due to difficult terrain and dense vegetation. No new cultural resources were identified within the surveyed portion of Segment 2. One previously recorded historic resource was identified west of the Casitas Substation.

CA-VEN-1109H. Site CA-VEN-1109H is a historic railroad spur initially constructed by the Ventura River and Ojai Valley Railroad in 1898 and acquired by Southern Pacific in 1899. This railroad spur was previously documented approximately 200 feet (60 meters) west of the Casitas Substation, on the eastern bank of the Ventura River. However, the recent survey revealed that the resource is no longer in existence and that a narrow bike path (Ventura River/Ojai Valley Trail) has been constructed within its alignment. No evidence of railroad ties, rails, or any other features associated with CA-VEN-1109H was observed within the project area.

Segment 3A

Segment 3A was characterized by mostly commercial land use, with citrus orchards and farms located along Highway 192. This segment was heavily disturbed from previous construction, as approximately 90 percent of Segment 3A is located adjacent to Highway 192. Approximately 0.7 miles of Segment 3A, located between Shepard Mesa Road and Casitas Pass Road (State Route 150, along the border of Ventura and Santa Barbara Counties), traverses private parcels impacted by residential construction and private orchards. No cultural resources were identified during the survey of Segment 3A.

Segment 3A is located completely within Quaternary alluvium (Conklling 2012:24). Quaternary alluvium is alluvial sediment deposited during the Pleistocene and Holocene. Humans have been present in California since the terminal Pleistocene, and Holocene alluvium was all deposited during the time that humans have been in the area. Quaternary alluvium, then, has the potential to contain buried archaeological remains. Buried sites can be particularly important in advancing knowledge of the past.

Segment 3B

In the eastern end of Segment 3B, the terrain consists of a relatively flat area with rolling hills and gently sloping ridgelines, currently used for cattle grazing and dominated by open pastures with oak groves located along several intermittent drainages. In the western end of Segment 3B, surveyors encountered steep hills with slopes between 40 and 45 degrees and citrus and avocado orchards, with narrow access roads running between rows of avocado and lemon trees. Overall, 16 tower locations were inventoried along Segment 3B. The remaining 12 towers and associated access roads have not yet been inventoried. No cultural resources were identified within the surveyed portion of Segment 3B.

The six westernmost tubular steel pole locations in Segment 3B are sited in Quaternary alluvium (Conklling 2012:24). As discussed above, Quaternary alluvium has the potential to contain buried archaeological materials. There is a small area of Monterey formation that outcrops near the center of Segment 3B (Conklling 2012:25). Some strata of the Monterey formation yield cherts that were sought after as tool stone by the prehistoric peoples of the area, so quarries may be expected in some areas on the Monterey formation.

Segment 4

Survey crews encountered a wide variety of terrain and land uses throughout Segment 4, including residential, commercial, private equestrian facilities, orchards, deep valleys, ridge tops, and densely overgrown ridges and hills. Overall, 62 of 65 structures were inventoried during the survey. Survey crews attempted to locate two previously recorded archaeological resources and identified three new historic resources within Segment 4.

The portion of the project area that passes through the Los Padres National Forest is in Section 4. All three structure locations examined during the survey of the National Forest land and all of the portions of access road surveyed on the forest were found to contain no cultural resources.

CA-SBA-107. Site CA-SBA-107 was originally recorded as several small rock shelters located near the top of an almost vertical stone cliff. The site was documented in 1927 by D.B. Rogers, who noted smoke blackening on the walls of all the shelters (Rogers 1927). Additionally, an asphalt-lined basket was reportedly recovered from one of the rock shelters. Maps on file at the Central Coast Information Center indicate that the site is located along an existing Segment 4 access road; however, the current survey failed to identify any large outcrops within 0.25 miles of its plotted location. Therefore, the site is believed to be plotted incorrectly, and in actuality it is located outside of the project area.

CA-SBA-3814. Site CA-SBA-3814 was documented as a small lithic scatter with fire-affected rock. No cultural material was observed during the current survey. Based on components in the site description (i.e., a gate and a fence), the site appears to be plotted incorrectly, and in actuality it is located outside of the project area at least 0.5 miles away.

SBCRP-1. Site SBCRP-1 is a historic period culvert which appears to have been constructed more than 50 years ago. The culvert is composed of a 4-foot-wide corrugated pipe with a 6-foot-high retaining wall located on each side of a north-south trending access road. The feature measures approximately 8 feet (2.4 meters) wide, with a rock wall on each side of the pipe. The culvert appears to be constructed of numerous "sand bags" joined together with poured cement or concrete, forming a slightly curved retaining wall on each side of the road. No artifacts or other features were identified in the vicinity of SBCRP-1. Site SBCRP-1 is located in Santa Barbara County along an existing access road of Segment 4. The resource appears to be part of a road improvement project, which may have been used to access the subtransmission structures that are part of SBCRP-3 located in Segment 4.

SBCRP-2. Site SBCRP-2 is a retaining wall that appears to have been constructed more than 50 years ago. It is located in Santa Barbara County, northwest of the north-south trending access road and approximately 0.25 miles north/northeast of SBCRP-1. The wall is constructed of shaped limestone rocks and measures approximately 6 feet high by 10 feet long (1.8 meters high by 3.0 meters long). Several large (4-foot, 1.2-meter) corrugated pipes are located on the east side of the road, approximately 100 feet (30 meters) from the wall. Similar to SBCRP-1, SBCRP-2 appears to be part of the road improvement used to access the subtransmission structures that are part of SBCRP-3 located in Segment 4.

SBCRP-3. Site SBCRP-3 consists of the subtransmission structures that currently carry a portion of the Santa Clara-Ojai-Santa Barbara 66-kilovolt (kV) Subtransmission Line. This historic subtransmission line is located within a 4.1-mile portion of Segment 4 in Santa Barbara County. The documented portion of the subtransmission line is composed of 26 lattice steel towers, each

measuring approximately 30 feet (9.1 meters) high, with a base measuring 3 by 3 feet (0.9 by 0.9 meters). The line appears to have been constructed in the 1930s and is visible on the Ventura, California (1941) 30-minute series topographic quadrangle. The uniform composition of the towers suggests that relatively few improvements have taken place along the documented portion of the line; however, it is unknown whether these are the original towers constructed in the 1930s or their subsequent replacements. A historic resources evaluation was conducted for the entire transmission line that includes SBCRP-3 (Becker 2012). The transmission line and the associated towers, including SBCRP-3, were found to be ineligible for the CRHR.

The eight structure locations closest to the Carpinteria Substation are located in areas of Quaternary alluvium. As noted above, this formation has the potential to contain buried archaeological material.

Getty Tap

This short segment would connect Segment 1 with the existing Santa Clara- Getty transmission line. The terrain consisted of steep hills dissected by ravines and intermittent drainages. The three poles that would be replaced along the proposed Getty Tap were surveyed, and all were located in disturbed areas adjacent to existing poles. No cultural resources were encountered.

Substations

The proposed project involves work at five substations of historic age: Casitas (1924–1929), Santa Barbara (1925), Carpinteria (1950), Santa Clara (1958/1973), and Goleta (1963). These substations have also been evaluated for eligibility for the CRHR (Becker 2012).

Carpinteria Substation. The Carpinteria Substation was built in 1950 in a Modernistic style. The substation complex includes a single control house building that is small in scale and rectilinear in plan, with a flat roof and no windows. It also includes a multiple equipment area containing transformers and switchracks. The substation complex is one of hundreds constructed or put in service by SCE in the post-World War II period, and it is not eligible for inclusion on the CRHR or the NRHP (Becker 2012:34–35).

Casitas Substation. Originally constructed between 1924 and 1929 at Casitas Springs to provide service to the unincorporated communities of Ventura, California, the Casitas Substation was initially put in service in approximately 1924 with 15-kV and 60-kV transformer racks. The complex was expanded through 1929 to include a Craftsman style cottage and garage (1924) for the property caretaker(s), and through the addition of a Classical Revival style substation building (1929). The Casitas Substation Building appears to be eligible for listing on the CRHR under CRHR Criterion 1 (events) and Criterion 3 (architecture) (Becker 2012:26–29). The existing transformer racks and switchracks at the property do not appear to contribute to the eligibility of the Casitas Substation Building.

Goleta Substation. The Goleta Substation was built in 1963 in a Modernistic style and portions were modified in 1964, 1966, and 1967. The substation complex includes a control house/switching station/office, a shop/garage structure, and a large bank of transformers and associated electrical equipment. The substation complex is one of hundreds constructed or put in service by SCE in the post-World War II period, and it is not eligible for inclusion on the CRHR or the NRHP (Becker 2012:38–39).

Santa Barbara Substation. Originally constructed in 1925, the SCE Santa Barbara Substation was designed and constructed as a substation complex featuring a Classical Revival style substation building that may have also featured a caretaker's cottage. Today, the property includes the 1925 substation building, a circa 1920s garage built in the Craftsman style, and a utilitarian shop/garage/ control room structure that appears to date to the 1960s or 1970s. The Santa Barbara Substation Building appears to be individually eligible for listing to the CRHR under Criterion 3 (architecture). The existing auto garage, and shop/garage/control room, as well as transformer racks and switchracks at the property, do not appear to contribute to the individual eligibility of the Santa Barbara Substation Building (Becker 2012:29–34).

Santa Clara Substation. The Santa Clara Substation was built in 1958 in a Modernistic style and was modified in 1973. The substation complex includes a control house/switching station, a shop/crew office, a fire equipment storage structure, and several banks of transformers and associated electrical equipment. The substation complex is one of hundreds constructed or put in service by SCE in the post-World War II period, and it is not eligible for inclusion on the CRHR or the NRHP (Becker 2012:36–38).

Telecommunications

Telecommunications lines are to be strung on the 66-kV transmission structures, and only the portions of the lines entering the Santa Clara, Casitas, and Carpinteria substations would be underground. No cultural resources were found adjacent to these substations during the survey of the segments, and the stringing of line on existing subtransmission structures would not impact any cultural resources.

De-energizing Structures

Portions of the existing lines in all of the segments will be de-energized and left in place. This action should not result in any ground disturbance and, therefore, should have no impacts on cultural resources.

4.5.1.2 Native American Consultation

In early 2012, SCE requested that the Native American Heritage Commission (NAHC) conduct a search of the Sacred Lands File to identify cultural resources or areas of concern to Native Americans within the vicinity of the project area. The NAHC's search did not indicate the presence of any known cultural resources, and it provided a list of 21 Native American individuals and organizations that may have knowledge of cultural resources in the project area. SCE sent letters to all recommended contacts on February 27, 2012. Two individuals, Mr. Freddy Romero of the Santa Ynez Band of Mission Indians, and Ms. Beverly Salazar-Folkes (Chumash, Tataviam, Fernandeño) responded as of February 27, 2012. Mr. Romero requested a copy of the cultural resources technical reports prepared for the proposed project prior to the circulation of the project's California Public Utilities Commission's (CPUC's) CEQA document. Ms. Salazar-Folkes requested that a monitor be present during ground-disturbing activities. SCE attempted follow-up phone calls to the remaining individuals between April 11 and April 16, 2012. As a result of this attempt, Suzy Ruiz-Parra (Chumash) requested that an archaeological monitor be present if earth-disturbing activities occurred near archaeological sites, and both Randy Guzman-Folkes (Chumash, Tataviam, Fernandeño, Shoshone Paiute, Yaqui) and Melissa Parra-Hernandez (Chumash) requested that the project information be resent to them. This information was resent in early 2012 (SCE 2012).

In January 2013, Mr. Romero contacted SCE to request another copy of the cultural resources report. Copies of all reports pertinent to the project were sent on behalf of the CPUC from Ecology and Environment, Inc.'s archaeologist in February of 2013. Upon reviewing the reports, Mr. Romero stated that he had no concerns relating to the project at that time, but provided information on a number of people in Ventura County who may have additional comments pertaining to that portion of the project. Mr. Romero provided contact information for these individuals, and Ecology and Environment, Inc.'s archaeologist contacted them by email and phone on behalf of the CPUC. Responses were received from Mr. Pat Tumamait (Chumash), Ms. Julie Tumamait (Chumash), and Mr. Alan Salazar (Chumash). Ms. Tumamait stated that she will review the CPUC document when it is published, and she identified a sensitive area within the project area.

On May 6, 2013, the CPUC met with two members of the Chumash community who requested to meet regarding the project. Mr. Pat Tumamait and Mr. Michael Cordero discussed how the project site relates to Chumash legend and the areas of sensitivity along the project corridor.

4.5.1.3 Paleontological Resources

Paleontology Record Search

A locality search was conducted through the online database of the University of California Museum of Paleontology, located on the campus of the University of California, Berkeley. This locality search included a review of the area geology and any known paleontological resources recovered from the surrounding area, as well as the geologic units that will likely be encountered during excavation activities associated with the proposed project.

According to the locality and archival research all of the mapped formations have produced fossils and have a low to high paleontological sensitivity (Table 4.5-2).

Table 4.5-2 Geologic Units and Paleontological Sensitivity within the Project Area

Segment	Geologic Unit	Age	Typical Fossil Types	Paleontological Resource Potential
3A, 3B, 4	Quaternary Alluvium	Quaternary	Vertebrates; Invertebrates	Low to High (Increases with Depth)
1	Las Posas Formation	Pleistocene	Marine Invertebrates, Rare Vertebrates	High
1	Santa Barbara Formation	Pliocene	Marine Invertebrates	High
1	Pico Formation	Pliocene	Marine Invertebrates	High
1	Sisquoc Formation	Pliocene	Marine Invertebrates	High
1	Monterey Formation	Pliocene	Marine Invertebrates	High
1, 2, 3B, 4	Monterey Formation	Miocene	Terrestrial Vertebrates	High
1, 2, 3B, 4	Rincon Formation	Miocene	Terrestrial Vertebrates	High
2, 3B, 4	Vaqueros Formation	Eocene-Oligocene	Terrestrial Vertebrates	High
2, 3B, 4	Sespe Formation	Eocene-Oligocene	Terrestrial Vertebrates	High
4	Coldwater Sandstone	Eocene	Marine Invertebrates, Rare Vertebrates	High

Geologic mapping indicates that the project area contains exposures of the Coldwater sandstone, Sespe formation, Rincon formation, Monterey formation, Sisquoc formation, Pico formation,

Santa Barbara formation, Las Posas formation, Quaternary alluvium, and Quaternary landslides from the Holocene (Conkling 2012).

Quaternary Alluvium. Holocene and Upper Pleistocene alluvium and colluvium are present within the Coastal Plain areas of Carpinteria. These poorly consolidated silt, sand, and gravel deposits were deposited along modern drainages and piedmont alluvial fans and floodplains. Because this unit spans both the Holocene and Pleistocene Epochs, the paleontological sensitivity of the unit increases from low to high with increases in depth. Where Quaternary alluvium was deposited during the Holocene (from 10,000 years ago to the present), there is no sensitivity for fossils because fossils, by definition, are more than 10,000 years old. By contrast, fossils from Pleistocene alluvial sediments are well represented throughout the Transverse Ranges.

Las Posas Formation. The Las Posas Formation is Pleistocene in age (approximately 250,000 years old). It is composed of weakly consolidated sandstones with some gravelly sand units, and is highly susceptible to landslides. This formation contains shallow water invertebrate fauna, and a ray tooth has been found in these sediments (Conkling 2012:24). The paleontological sensitivity of the unit is high.

Santa Barbara Formation. The Santa Barbara Formation is an Early to Middle Pleistocene (2.5 million to 750,000 years old) marine formation primarily composed of poorly consolidated claystone and shale with some areas of sandstone. This formation contains diverse marine invertebrate assemblages, although none of these have been found in the vicinity of the project area. The nearest recorded locality is approximately 4 miles west-southwest of the project area. The paleontological sensitivity of the unit is high.

Pico Formation. The Pliocene to Pleistocene (approximately 3.5 to 1.0 million years old) Pico Formation was deposited in a marine environment, and is composed of both coarse-grained sand and conglomerate units, with more silt and clay dominated units in some areas. This formation contains sporadic fossil deposits consisting primarily of invertebrates such as gastropods, bivalves, arthropods, and foraminifera. The paleontological sensitivity of the unit is high.

Sisquoc Formation. The Sisquoc Formation is of Upper Miocene and Lower Pliocene age (approximately 6 to 4 million years old). The formation consists of claystone, mudstone, siltstone, shale, diatomite, and conglomerates, with considerable regional variation, and was deposited in a moderately deep marine environment. Fossils have been found in this formation, primarily in the area of Lompoc approximately 50 miles to the northwest of the Project. In addition to the abundant diatoms that make up the diatomite, fossils of vertebrates such as sea lions and walruses, bony and cartilaginous fishes, and birds have been found in the Sisquoc Formation. All known fossil localities have been in areas along the coast where the Sisquoc Formation is exposed due to erosion. The paleontological sensitivity of the unit is high.

Monterey Formation. The Monterey Formation is an extensive Miocene (16 to 6 million years old) oil-rich sedimentary deposit. Fossils of marine vertebrates (whales, seals, sea lions, dolphins, porpoises), fish, and birds are relatively common from the formation; however, no localities have been identified within 10 miles of the project area. The paleontological sensitivity of the unit is high.

Rincon Formation. The Rincon Formation is Lower Miocene in age (24 to 17.5 million years old) and is exposed along the coastal portions of southern Santa Barbara County eastward into Ventura County. Consisting of massive to poorly bedded shale, mudstone, and siltstone, it weathers readily

to a rounded hilly topography with clayey, loamy soils. The paleontological sensitivity of the unit is high.

Shales of the Rincon Formation were deposited on the deep sea floor during the time at which the Miocene sea reached its greatest depth. Microfossils are common in the Rincon Formation, and have been helpful in dating the unit. The faunal assemblage indicates that the sea was tropical to subtropical at this time. Formaniferal remains in particular are abundant. Both vertebrate and invertebrate fossils have been recovered. These collecting localities are approximately 5 miles south of Segment 3B. The paleontological sensitivity of the unit is high.

Vaqueros Formation. The Vaqueros Formation was initially deposited during the Upper Oligocene (28 to 24 million years old). Sediments characteristic of this formation include structureless very fine to medium grained sandstone with some large cross-bedding and parallel lamination in some areas. Fossils present in the formation include invertebrates and terrestrial vertebrate specimens. The paleontological sensitivity of the unit is high.

Sespe Formation. The Sespe Formation is an Oligocene and Upper Eocene (40 to 24 million years old), nonmarine, fluvial, maroon, reddish-brown, and greenish- to pinkish-gray sandstone, mudstone, and conglomerate. In the Project Area, the formation is divided into three informal subunits: upper sandstone and mudstone unit, middle conglomerate and sandstone unit, and the lower conglomerate and sandstone unit. These units are distinguished from each other mainly by differences in lithology, provenance, and age.

Numerous vertebrate fossils have been found in the Sespe Formation, with the principal locations of the finds north of Simi Valley in Ventura County. A few of the many species associated with the Sespe Formation include Amynodontopsis (an Eocene rhinoceros), Simimys, a rodent, and the oreodont Sespia. The nearest known locality within the Sespe Formation is approximately 8 miles from the project area. The paleontological sensitivity of the unit is high.

Coldwater Sandstone Formation. The Coldwater Sandstone Formation is an Upper and Middle Eocene sandstone of shallow marine origin (42.5 to 39.5 million years old). Sandstone beds are resistant and form hogbacks where steeply dipping. The upper part of the unit is locally conglomeratic, rich in fossil oyster shells, and recently produced a limited marine vertebrate fauna. Fossils of numerous mollusks, including many species of the genus Turritella, can be found in the Coldwater Sandstone Formation, particularly near the top of the formation where the water at time of deposition was shallowest. Outcrops along Old San Marcos Pass Road near the contact with the Sespe Formation are rich locations for finding remnants of these gastropods. The remnants of oyster beds can be found elsewhere near the top contact with the Sespe Formation. The paleontological sensitivity of the unit is high.

Paleontology Field Survey

A field survey for paleontological resources was conducted and included viewing proposed new spur road locations and examining proposed subtransmission structure locations. Throughout the survey, exposures of native rock were examined to verify the local geology and look for fossil resources. Although no fossils were identified within the project area during the paleontological field survey, sediments consistent with the descriptions of the formations were observed in areas correspondingly mapped within those units.

66-kV Subtransmission Lines

Segment 1

Segment 1 crosses areas of Los Posas, Santa Barbara, Pico, Sisquoc, Rincon, and Sespe formations. Although no fossils were observed during the field survey, all these formations have a high potential to yield paleontological resources.

Segment 2

Segment 2 traverses areas of Rincon and Sespe formations. Both of these formations have a high potential to yield paleontological resources.

Segment 3A

Segment 3A crosses only one formation, Quaternary Alluvium. This formation ranges from 2.58 million to 10,000 years old, although Holocene Alluvium dating to after 10,000 years ago is also present in this unit. Because of this, the potential for yielding paleontological resources is rated low to high. The younger portions have no sensitivity, but the portions that are over 10,000 years old are considered to

Segment 3B

Quaternary Alluvium, as well Monterey, Rincon, and Sespe formations underlie Segment 3B. As discussed above, the younger portions of the Quaternary Alluvium are not sensitive for paleontological resources, but the older (after 10,000 years ago) portions are highly sensitive. The Monterey, Rincon, and Sespe formations are also highly sensitive.

Segment 4

Segment 4 crosses a small area of Quaternary Alluvium at its western end, runs over Sespe formation for most of its length, but crosses an area of Coldwater Sandstone, and ends with a section of Rincon formation. As discussed above, the older portions of the Quaternary Alluvium have a high sensitivity for paleontological resources, whereas the more recent (younger than 10,000 years) portions have no sensitivity. The other formations crossed by this segment have high sensitivity for paleontological resources.

Segment 5

At the completion of the project the applicant proposes to remove an additional 12 LST and two wood H-frame structures located between Segments 3B and 4. This work would occur in areas of Quaternary Alluvium, Rincon formation, Monterey formation, and Sespe formation. Quaternary Alluvium that is over 10,000 years old has a high sensitivity or paleontological resources, but younger Quaternary Alluvium is not sensitive. The other formations on which structures will be removed have high sensitivity for paleontological resources

Getty Tap

The Getty Tap crosses Santa Barbara formation. This formation has a high sensitivity for paleontological resources.

Substations

The proposed project involves work at five substations of historic age: Subsurface work is proposed at the Santa Clara, Casitas, and Carpinteria Substations. The work at the Goleta and Santa Barbara Substations will not entail ground-disturbing activities and are not considered in the discussion below.

Santa Clara Substation. The Santa Clara Substation is located on the Las Posas formation. This formation has high sensitivity for containing paleontological resources.

Casitas Substation. The Rincon formation underlies the Casitas Substation. The Rincon formation is rated as having a high sensitivity for paleontological resources.

Carpinteria Substation. The Carpinteria Substation is located in an area of Quaternary Alluvium. The older portions of this alluvium, those older than 10,000 years, have a high sensitivity for paleontological resources.

Telecommunications

Telecommunications lines are to be strung on the 66-kV transmission structures, and only the portions of the lines entering the Santa Clara, Casitas, and Carpinteria Substations within the substation perimeter would be underground. These substations are located in areas of Las Posas formation, Rincon formation, and Quaternary Alluvium. The Las Posas and Rincon formations, as well as the post-10,000 year old portions of the Quaternary Alluvium all have a high sensitivity for paleontological resources.

4.5.2 Regulatory Setting

This section summarizes federal, state, and local laws, regulations, and standards that govern cultural resources in the project area.

4.5.2.1 Federal

National Historic Preservation Act of 1966

Enacted in 1966, the National Historic Preservation Act (NHPA) declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer (SHPO) and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP and that the ACHP must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings.

National Register of Historic Places

As presented in 36 CFR 60.2, the NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- **Criterion A**: It is associated with events that have made a significant contribution to the broad patterns of our history.
- **Criterion B**: It is associated with the lives of persons who are significant in our past.
- **Criterion C**: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- **Criterion D**: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

4.5.2.2 State

California Office of Historic Preservation

The State of California implements the NHPA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation, as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The Office of Historic Preservation also maintains the California Historic Resources Inventory. The State Historic Preservation Officer is an appointed official who implements historic preservation programs within the state's jurisdictions.

California Register of Historical Resources

The CRHR is an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change (PRC §5024.1[a]). The criteria for eligibility for listing on the CRHR are based on NRHP criteria (PRC §5024.1[b]). Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the NRHP.

California Environmental Quality Act

Most counties and cities in California have regulations that address paleontological resources. At the state level, CEQA requires public agencies and private interests to identify environmental consequences of their proposed projects on any object or site of significance to the scientific annals of California.

Public Resources Code Sections

PRC 5020–5024. These sections are statutes that pertain to the protection of historical resources.

PRC 5024.1. This section defines historical resources and establishes the CRHR, sets forth criteria to determine resource significance, defines CRHR-eligible resources, and lists nomination procedures.

PRC 5097.5, PRC 5097.9, and PRC 30244. These sections regulate the removal of paleontological resources from state lands, define unauthorized removal of fossil resources as a misdemeanor, and require mitigation of disturbed sites, respectively.

PRC 5097.91 through PRC 5097.991. These sections pertain to the establishment and authorities of the NAHC. They also prohibit the acquisition or possession of Native American artifacts or human remains taken from a Native American grave or cairn, except in accordance with an agreement reached with the NAHC, and provide for Native American remains and associated grave artifacts to be repatriated.

PRC 5097.98 (b) and (e). These sections require a landowner on whose property Native American human remains are found to limit further development activity in the vicinity until conferring with the most likely descendants (as identified by the NAHC) to consider treatment options.

PRC 5097.993 through PRC 5097.994. These sections establish the Native American Historic Resource Protection Act, which makes it a misdemeanor crime to perform unlawful and malicious excavation, removal, or destruction of Native American archaeological or historical sites on public or private lands.

PRC 6254 (r). This section establishes the California Public Records Act, which protects Native American graves, cemeteries, and sacred places maintained by the NAHC by protecting records of such resources from public disclosure.

PRC 21083.2. This section of the CEQA Statute provides for the protection of "unique" archaeological resources as defined in the Statute. If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require that reasonable

efforts be made to preserved in place or avoid the resources. This section also establishes mitigation requirements for the excavation (data recovery) of unique archaeological resources. See also Section 15064.5(c) of the CEQA Guidelines (14 CCR).

PRC 21084.1. This section of the CEQA Statute establishes that an adverse effect on a historical resource qualifies as a significant effect on the environment. See also Sections 15064.5 and 15126.4(b) of the CEQA Guidelines (14 CCR).

PRC 65092. This section provides for notice of projects in consideration for construction to be sent to California Native American tribes who are on the contact list maintained by the NAHC.

California Code of Regulations Sections

14 CCR 1427. This code recognizes that California's archaeological resources are endangered by urban development and population growth and by natural forces. It declares that these resources need to be preserved in order to illuminate and increase public knowledge of the historic and prehistoric past of California.

14 CCR 4307. This code states that no person shall remove, injure, deface, or destroy any object of paleontological, archaeological, or historical interest or value.

14 CCR 15064.5. This section of the CEQA Guidelines recognizes that a historical resource includes: (1) a resource listed in, or determined to be eligible by, the State Historical Resources Commission for listing in the CRHR; (2) a resource included in a local register of historical resources; and (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. In some cases, an archaeological resource may be considered a historical resource.

14 CCR 15064.5(c). If an archaeological resource does not meet the criteria for a historical resource contained in the CEQA Guidelines Section 15064.5, it may be treated in accordance with the provisions of PRC Section 21083.2 if it is a "unique" archaeological resource. If an archaeological resource is neither unique nor historical, effects of the proposed project on the resource would not be considered a significant effect.

14 CCR 15126.4(b). This section of the CEQA Guidelines establishes mitigation guidelines for effects on historical resources and historical resources of an archaeological nature.

Health and Safety Code (HSC)

HSC 7050 through HSC 7054. These sections are statutes that pertain to disturbance and removal of human remains, felony offenses related to human remains, and depositing human remains outside of a cemetery.

HSC 8010 through HSC 8011. These HSC sections establish the California Native American Graves Protection and Repatriation Act, which is consistent with and facilitates implementation of the federal Native American Graves Protection and Repatriation Act.

Senate Concurrent Resolutions

Number 43. This resolution requires all state agencies to cooperate with programs of archaeological survey and excavation and to preserve known archaeological resources whenever it is reasonable to do so.

Number 87. This resolution provides for the identification and protection of traditional Native American resource-gathering sites on state land.

Penal Code Section 622 (Destruction of Sites)

This code establishes as a misdemeanor the willful injury, disfiguration, defacement, or destruction of any object or thing of archaeological or historical interest or value, whether situated on private or public lands.

Paleontological Resources Under CEQA

Although paleontological resources relate to geological conditions (that is, they are usually found only in sedimentary rock or soils), the CEQA Appendix G checklist includes this analysis under the cultural resources category. Except for the checklist, there are no state laws, regulations, or standards applicable to paleontological resources on private property.

4.5.2.3 Regional and Local

The CPUC has sole and exclusive state jurisdiction over the siting and design of the proposed project. The CPUC has adopted General Order (GO) 131-D to regulate the construction of electric public utility facilities. GO 131-D, Section XIV.B. states that "...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 Commission's jurisdiction." GO 131-D, Section XV states that "A coastal development permit shall be obtained from the California Coastal Commission for development of facilities subject to this order in the Coastal Zone." As part of its environmental review process, SCE considered local plans and policies and local land use priorities and concerns. These are discussed below.

Santa Barbara County Coastal Land Use Plan, Archaeological and Historical Policies

The Santa Barbara County Coastal Land Use Plan contains a number of policies related to historical and archaeological resources, including:

> **Policy 10-1.** *All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.*
>
> **Policy 10-2.** *When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.*
>
> **Policy 10-3.** *When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.*

Policy 10-4. *Off-road vehicle use, unauthorized collecting of artifacts, and other activities other than development which could destroy or damage archaeological or cultural sites shall be prohibited.*

Policy 10-5. *Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.*

Santa Barbara County Comprehensive Plan, Land Use Element, Historical and Archaeological Sites Policies

The Santa Barbara County Comprehensive Plan, Land Use Element contains a number of policies related to historical and archaeological resources, including:

Policy 1. *All available measures, including purchase, tax relief, purchase of development rights, and others, shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.*

Policy 2. *When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.*

Policy 3. *When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed in accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.*

Policy 4. *Off-road vehicle use, unauthorized collection of artifacts, and other activities other than development which could destroy or damage archaeological or cultural sites shall be prohibited.*

Policy 5. *Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.*

Ventura County General Plan

The Ventura County General Plan contains a number of goals and policies related to paleontological and cultural resources. The goals contained in the General Plan are as follows:

Goal 1. *Identify, inventory, preserve, and protect the paleontological and cultural resources of Ventura County (including archaeological, historical, and Native American resources) for their scientific, educational, and cultural value.*

Goal 2. *Enhance cooperation with cities, special districts, other appropriate organizations, and private landowners in acknowledging and preserving the County's paleontological and cultural resources.*

The policies contained in the Ventura County General Plan that may apply to nondiscretionary developments are as follows:

Policy 3. *Mitigation of significant impacts on cultural or paleontological resources shall follow the Guidelines of the State Office of Historic Preservation, the State NAHC, and shall be performed in consultation with professionals in their respective areas of expertise*

Policy 4. *Confidentiality regarding locations of archaeological sites throughout the County shall be maintained in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.*

Policy 6. *The Building and Safety Division shall employ the State Historic Building Code for preserving historic sites in the county.*

City of Carpinteria General Plan

The City of Carpinteria General Plan contains a number of policies related to historical and archaeological resources, including:

OSC-16: *Carefully review any development that may disturb important archaeological or historically valuable sites.*

4.5.3 Impact Analysis

4.5.3.1 Methodology and Significance Criteria

The cultural resources technical reports that have been prepared for the proposed project (Switalski and Bardsley 2012a, 2012b; Schmidt 2013); Proponent's Environmental Assessment (PEA) documents (SCE 2012); and Department of Parks and Recreation site and isolate forms were all reviewed as research sources for this document. Additional background research was also conducted on the general project area and on CEQA statutes to ensure that impact assessments and mitigation measures are adequate to appropriately mitigate the impacts to resources.

Cultural resources records searches were conducted for the PEA at the South Central Coastal Information Center, located at California State University, Fullerton, and at the Central Coast Information Center, located at the University of California, Santa Barbara for the cultural resources surveys (as noted previously) to determine the extent of previous cultural resources investigations within 0.5 miles of the transmission lines, to determine whether any archaeological sites or architectural resources have been previously identified within the area. Materials reviewed as part of the records search included archaeological site records, historic maps, and listings of resources on the NRHP, the CRHR, California Points of Historical Interest, California Landmarks, and National Historic Landmarks.

For paleontological resources, the paleontological resources report (Conkling 2012) was reviewed. This report included the results of a locality search conducted through the online database of the University of California Museum of Paleontology and review of pertinent geological maps, as well as the results of the field survey conducted for the proposed project.

The significance criteria were defined based on the checklist items in Appendix G of the CEQA Guidelines. An impact is considered significant if the project would:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or

d) Disturb any human remains, including those interred outside of formal cemeteries.

Cultural resources include archaeological and historic objects, sites and districts, historic buildings and structures, and sites and resources of concern to local Native Americans and other ethnic groups. Cultural resources that meet the criteria of eligibility for the CRHR are termed "historic resources." Archaeological resources that do not meet CRHR criteria also may be evaluated as "unique"; impacts on such resources could be considered significant, as described below.

A site meets the criteria for inclusion on the CRHR if:

1. It is associated with events that have made a significant contribution to the broad patterns of California's History and Cultural Heritage;
2. It is associated with the life or lives of a person or people important to California's past;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. It has yielded, or may be likely to yield, information important to prehistory or history.

A resource eligible for the CRHR must meet one of the criteria of significance described above and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR.

4.5.3.2 Applicant Proposed Measures

The applicant has committed to the following applicant proposed measures (APMs) as part of the design of the proposed project (see Chapter 2, Table 2-10 for a full description of each APM):

APM CUL-1: Avoidance, Minimization, and Mitigation. Potential project-related effects on historical resources may be mitigated or reduced to a less than significant level by implementing SCE's cultural resources Unanticipated Discovery Plan and employing one or more standard practice mitigation scenarios including, but not limited to:

- Prehistoric Resources
  - avoid where feasible (avoidance by design, preserve in place, capping)
  - minimize (reduction of Area of Direct Impact/Effect)
  - mitigate (historic context statement, data recovery)
- Historic Resources
  - avoid where feasible (avoidance by design, preserve in place, capping)
  - minimize (reduction of Area of Direct Impact/Effect)
  - mitigate (historic context statement, data recovery)

- Historic Architecture/Utility Infrastructure
  - avoid where feasible (avoidance by design, preserve in place)
  - minimize (reduction of Area of Direct Impact/Effect)
  - mitigate (historic context statement, Historic American Engineering Record, Historic American Building Survey, advanced California Department of Parks and Recreation recordation)

The applicant's Unanticipated Discovery Plan would describe the procedures to be followed in the event that previously unidentified cultural resources are discovered during construction of the proposed project. If previously unidentified cultural resources are discovered during construction, personnel would be instructed to suspend work in the vicinity of the find.

The resource would then be evaluated for listing in the CRHR by a qualified archaeologist, and, if the resource is determined to be eligible for listing in the CRHR, either the resource would be avoided or appropriate archaeological protective measures would be implemented. If human skeletal remains are uncovered during construction of the proposed project, the applicant and/or its contractors shall immediately halt all work in the immediate area, contact the applicable County Coroner to evaluate the remains, and follow the procedures and protocols set forth in Section 15064.5 (e)(1) of the CEQA Guidelines.

Per Health and Safety Code 7050.5, upon the discovery of human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. If the applicable County Coroner determines that the remains are Native American, it is anticipated that the coroner would contact the Native American Heritage Commission in accordance with Health and Safety Code Section 7050.5(c) and Public Resources Code 5097.98 (as amended by Assembly Bill 2641). In addition, the applicant shall ensure that the immediate vicinity where the Native American human remains are located is not damaged or disturbed by further development activity until the applicant has discussed and conferred, as prescribed in Public Resources Code 5097.98, with the most likely descendants regarding their recommendations.

APM CUL-2: Paleontological Resources Management Plan (PRMP). SCE shall prepare and implement a PRMP that would include, but not be limited to: preconstruction coordination; recommended monitoring methods; emergency discovery procedures; sampling and data recovery methods, if needed; museum storage coordination for any specimens and data recovered; and reporting requirements. The PRMP would also provide for sediment screening, fossil preparation, curation, and preparation of a report detailing the results of the work. In addition, the PRMP would specify monitoring requirements such as the presence of a paleontological monitor when work is being performed at formations with high paleontological sensitivity. If very few or no fossil remains are found during ground-disturbing activities, monitoring time can be reduced or suspended entirely, per recommendations of the paleontological field supervisor.

APM CUL-3: A cultural resources survey of those areas that could not be previously accessed would be conducted prior to the start of construction. These surveys would identify and/or address any potential sensitive cultural resources that may be impacted by the Project, including the substation sites, subtransmission line and telecommunication cable routes, wire stringing locations, access and spur roads, drilling and crane pads, and staging yards.

4.5.3.3 Environmental Impacts

Impact CR-1: Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.

LESS THAN SIGNIFICANT WITH MITIGATION

Construction activities could impact known and unknown historical resources. Data collected from the records search and from surveys revealed that historical resources have been documented within the proposed project area. The surveys also recorded the presence of previously unrecorded sites. With the exception of cultural resource site CA-VEN-58, the surveys indicated that the previously recorded sites have either been destroyed or appear to have been the subject of recording errors such that they are actually outside the project area. CA-VEN-58 is located outside the alignment for Segment 1 and would not be impacted by the proposed project.

Cultural resource sites SBCRP-1 and SBCRP-2 were recorded as a result of the surveys for the proposed project and have been determined to be ineligible for inclusion on the CRHR. Cultural resource site SBCRP-3 was also recorded as a result of the surveys for the proposed project and requires formals evaluation for eligibility for CRHR. SCE Bonsall#1 was located on a survey for a road that is no longer part of the proposed project (Schmidt 2013). It, too, is outside the alignment of Segment 1 and would not be impacted by the proposed project. It is important to note that substantial portions of the project area remain unsurveyed. It is possible that currently unrecorded sites may exist in these unsurveyed areas. The applicant would implement APM CUL-1 and APM CUL-3, which would require the applicant to conduct cultural surveys for all areas not previously surveyed and to avoid, minimize, and mitigate impacts to cultural resources. Potential impacts to historical resources would remain to be significant with the implementation of APMs. Implementation of mitigation measures (MM) CR-1 through MM CR-10, and MM CR-15 would require the applicant to conduct intensive-level cultural resources surveys (transects no greater than 10 meters) for all areas to be disturbed that have not already been surveyed for cultural resources and submit reports from subsequent surveys to the CPUC; establish buffers around environmentally sensitive areas; use a qualified cultural resource consultant for construction monitoring; prepare plans to outline protocols to follow when a cultural resources can't be avoided, when native American consultation is needed, and when a previously undiscovered resource is found; and provide cultural resource training to all construction workers. Impacts under this criterion would be reduced to less than significant with mitigation.

Impact CR-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.

LESS THAN SIGNIFICANT WITH MITIGATION

Impacts on archaeological resources from the construction of the proposed project would be similar to impacts on historical resources from construction activities as described under Impact CR-1. The applicant would implement APM CUL-1 and APM CUL-3, which would require the applicant to conduct cultural surveys for all areas not previously surveyed and to avoid, minimize, and mitigate impacts to cultural resources. Potential impacts to archaeological resources would remain to be significant with the implementation of APMs. The impacts would be reduced to less than significant with the implementation of MM CR-1 through MM CR-10, and MM CR-15.

Impact CR-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
LESS THAN SIGNIFICANT WITH MITIGATION

The proposed project would include ground disturbance in geologic units with high potential to contain paleontological resources (Table 4.5-2). The applicant would implement APM CUL-2, which would require the applicant to prepare a PRMP that would outline monitoring, testing, and data recovery protocol. However, potential impacts to paleontological resource would remain to be significant. Implementation of MM CR-11 through MM CR-15 would require the applicant to prepare the PRMP to meet additional standards and submit the plan to the CPUC for review; use a qualified paleontological consultant for construction monitoring; prepare plans to outline protocols to follow when a previously undiscovered paleontological resource is found; and provide paleontological resource training to all construction workers. Impacts under this criterion would be reduced to less than significant with mitigation.

Impact CR-4: Disturb any human remains, including those interred outside of formal cemeteries.
LESS THAN SIGNIFICANT WITH MITIGATION

A review of records and field studies in the proposed project area has revealed that potential disturbance of human remains is possible. The applicant would implement APM CUL-1 and APM CUL-3, which would require the applicant to conduct cultural surveys for all areas not previously surveyed and to avoid, minimize, and mitigate impacts to human remains. Potential impacts to human remains would remain to be significant with the implementation of APMs. Impact to human remains would be reduced to less than significant with the implementation of MM CR-1 through MM CR-10.

4.5.4 Mitigation Measures

MM CR-1: Additional Cultural Resources Surveys. Prior to issuance of construction permits, the applicant will ensure that qualified archaeological consultants, as specified in the Cultural Resources Plans, will conduct intensive-level cultural resources surveys (transects no greater than 10 meters) for all areas to be disturbed that have not already been surveyed for cultural resources and that, prior to the project, had been undisturbed. Reports that specify the research design, methods, and survey results will be submitted to the CPUC for review and must be accepted by the CPUC prior to the start of ground disturbance in the unsurveyed areas.

MM CR-2: Avoid Known Cultural Resources. Prior to construction, on a complete set of final project construction plans, cultural resources sites will be denoted as Environmentally Sensitive Areas by a CPUC-approved cultural resources consultant (MM CR-3). If any project-related construction or restoration activity will occur within 50 feet of CA-VEN-58, SCE Bonsall#1, or any other known cultural resource site, the sites will be designated as Environmentally Sensitive Areas. This list is not intended to be exhaustive and may not include all sites denoted as Environmentally Sensitive Areas on the project plans. The project plans will become confidential and only be provided to approved cultural resources consultants, Native American monitors approved by a tribe (MM CR-5) for monitoring during project construction (if applicable), and the applicant's Environmental Coordinators and construction supervisors. A CPUC cultural resources specialist will approve the demarked plans prior to start of construction.

All cultural resources located within or adjacent to Environmentally Sensitive Areas will be protected by temporary fencing prior to the start of construction activities within 100 feet of the areas. All Environmentally Sensitive Areas will be avoided throughout construction and restoration of the proposed project to the maximum extent feasible. If the areas cannot be avoided, no work will be conducted in the area until a CPUC-approved cultural resources consultant (MM CR-3) inspects the cultural resources and determines whether further investigation is required. If further investigation is required, work will not be conducted in the area until testing and evaluation (MM CR-8) and data recovery (MM CR-9), if necessary, are completed. The temporary fencing will be installed by or under the direct supervision of a qualified archaeologist. The fencing will surround the site, leaving a 50-foot buffer (at minimum). No signs will be placed that indicate an Environmentally Sensitive Area contains cultural resources. The temporary fencing will be removed once construction in proximity to the Environmentally Sensitive Area is complete.

MM CR-3: Qualified Cultural Resources Consultants. The applicant will retain the services of qualified professional (CPUC-approved) cultural resources consultants who meet or exceed the U.S. Secretary of the Interior qualification standards for professional archaeologists published in 36 Code of Federal Regulations 61 and who have experience working in the jurisdictions traversed by components of the proposed project sufficient to identify the full range of cultural resources that may be found in the proposed project area. The consultants will also have knowledge of the cultural history of the proposed project area. The resumes and supporting information for each cultural resources consultant will be submitted to the CPUC for approval. At least one qualified cultural resources consultant must be approved by the CPUC prior to start of construction.

MM CR-4: Cultural Resources Plans. Prior to construction, the applicant will submit Cultural Resources Plans for the respective project components, prepared by the approved consultant(s) (MM CR-3) for review and approval by the CPUC. The final Cultural Resources Plans shall be implemented, as specified, throughout construction and restoration. These plans will address cultural resources eligible for the CRHR that cannot be preserved by avoidance and to identify areas where monitoring of earth-disturbing activities is required. The monitoring plan shall include, at a minimum:

- A list of personnel to whom the plan applies. Requirements, as necessary, and plans for continued Native American involvement and outreach, including participation of Native American monitors during ground-disturbing activities as determined appropriate.
- Brief identification and description of the general range of the resources that may be encountered.
- Identification of the elements of a site that will lead to it meeting the definition of a cultural resource requiring protection and mitigation.
- Identification and description of resource mitigation that will be undertaken if required.
- Description of monitoring procedures that will take place for each project component area as required.
- Description of how often monitoring will occur (e.g., full-time, part time, spot checking).
- Description of the circumstances that will result in the halting of work and a statement that either the archaeological monitor or the Native American Monitor is authorized to call for work to be stopped.

- Description of the procedures for halting work and notification procedures for construction crews.
- Testing and evaluation procedures for resources encountered.
- Description of procedures for curating any collected materials.
- Reporting procedures.
- Contact information for those to be notified or reported to.

MM CR-5: Native American Consultation and Participation Planning. Prior to construction, the applicant will provide evidence to the CPUC that tribes requesting consultation with the applicant regarding the project design and impacts on cultural resources were consulted. In addition, the applicant will provide evidence to the CPUC that tribes that have expressed interest in the project during any phase (i.e., project application through end of construction and restoration) are given the opportunity to participate in additional cultural resources surveys (MM CR-1) and cultural resources monitoring when performed by a CPUC-approved cultural resources consultant (MM CR-3).

To outline the expected duties and responsibilities of all parties involved, the applicant and a CPUC-approved cultural resources consultant will submit a Native American Participation Plan prior to construction. The final Native American Participation Plan shall be implemented, as specified, throughout construction and restoration. Tribes that have expressed interest in the project prior to construction will be given the opportunity to participate in development of the plan. At minimum, the plan will specify that:

- Native American monitors, if approved by a tribe, are expected to participate in worker environmental awareness and health and safety training and follow all health and safety protocols.
- Attendance by Native American monitors during construction and restoration of the project is at the discretion of the tribe, and the absence of a Native American monitor, should the tribes choose to forgo monitoring for some reason, will not delay work.
- The Native American monitors will have the ability to notify a CPUC-approved cultural resources consultant who has the authority to temporarily stop work (MM CR-7) if they find a cultural resource that may require recordation and evaluation.
- Interpretation of a find will be requested from Native American monitors involved with the discovery, evaluation, or data recovery of unanticipated finds for inclusion in the final Cultural Resources Report (MM CR-10).
- The tribes involved with preparation of the Native American Participation Plan will be given the opportunity to participate in the development of Testing and Evaluation Plans (MM CR-8) and Data Recovery Plans (MM CR-9) if the development of these plans is required.
- Native American monitors approved by a tribe for monitoring work on the project will be notified 30 days prior to start of construction of the various project components.
- The Native American monitors will be compensated for their time. If more than one tribal group wishes to participate in the monitoring, SCE will work out an agreement for sharing of monitoring compensation.

- Define a process to inform tribes of completed cultural surveys and to provide a copy of the survey to interested tribes.

MM CR-6: Construction Monitoring. Prior to construction, the applicant will retain qualified archaeologists as specified in the Cultural Resources Plans (MM CR-4) to monitor cultural resources mitigation and ground-disturbing activities in culturally sensitive areas during construction and restoration. The archaeological monitors will work under the supervision of the qualified cultural resources consultant unless the consultant serves as monitor, as well. The archaeological monitors' credentials must be submitted to CPUC for approval prior to the notice to proceed. These areas include the Quaternary alluvium, areas adjacent to sites CA-VEN-58 and SCE Bonsall#1, and any other resources identified in the Cultural Resources Plan. The qualified archaeologists will attend preconstruction meetings to provide comments and/or suggestions concerning monitoring plans and discuss excavation plans with excavation contractors.

MM CR-7: Stop Work for Unanticipated Cultural Resources Discoveries. In the event that previously unidentified cultural resources are uncovered during implementation of the project, SCE will ensure that ground-disturbing work is halted or diverted from the discovery to another location. The CPUC-approved cultural resources consultant will inspect the discovery and determine whether further investigation is required. If the discovery is significant but can be avoided, and no further impacts will occur, the resource will be documented and no further effort will be required. If the resource is significant but cannot be avoided, and may be subject to further impact, the CPUC-approved cultural resources consultant, in consultation with and under the direction of the qualified archaeologist, will evaluate the significance of the resource based on eligibility for the CRHR or local registers and implement appropriate measures in accordance with the Cultural Resources Plans.

If human remains are encountered, California HSC Section 7050.5 states that no further disturbance shall occur until the appropriate County Coroner has made the necessary findings as to origin. Further, pursuant to California PRC Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the appropriate County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then identify the "most likely descendant(s)" within 48 hours of receiving notification of the discovery. The most likely descendant(s) shall then make recommendations and engage in consultations concerning the treatment of the remains as provided in PRC 5097.98.

MM CR-8: Testing and Evaluation Plan. If any cultural resource is discovered during construction that cannot be avoided, work in the area of the find will be immediately halted as specified in MM CR-7. A CPUC-approved cultural consultant (MM CR-3) will determine if further investigation is required (MM CR-7). If so, the CPUC-approved cultural consultant will submit a Testing and Evaluation Plan to the CPUC for approval prior to further disturbance of the resource. The final Testing and Evaluation Plan shall be implemented, as specified, throughout construction and restoration. After testing and evaluation is completed, a report documenting the results will be submitted to the CPUC. If avoidance is recommended, the cultural resource will be avoided, to the maximum extent feasible. If avoidance is not possible, a Data Recovery Plan will be developed and implemented (MM CR-9).

MM CR-9: Data Recovery Plan. If avoidance of a cultural resource found during project construction that is eligible for listing in the CRHR or local registers or as "unique" archaeological resources pursuant to CEQA is not feasible, a CPUC-approved cultural resources consultant (MM

CR-3) (as applicable) will prepare a Data Recovery Plan that outlines the extent of excavation, recovery/salvage, curation, and recordation that will occur. The Data Recovery Plan will be submitted to the CPUC for approval prior to the start of any data recovery work. Data recovery will be completed as specified in the approved Data Recovery Plan prior to continuing work within the area of the find.

MM CR-10: Cultural Resources Reporting. Prior to final inspection after construction of project components has been completed, the applicant's qualified archaeologists as specified in the Cultural Resources Plans will submit reports to the CPUC summarizing all monitoring and mitigation activities and confirming that all mitigation measures have been implemented.

MM CR-11: Paleontological Monitoring and Treatment Plan. Prior to start of construction, the applicant will submit a Paleontological Monitoring and Treatment Plan for each project component that is prepared by a CPUC-approved paleontological consultant (MM CR-12) to the CPUC for approval. This plan will be adapted from the Society of Vertebrate Paleontology's Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010) to specifically address each project component. In addition, the plan will, at minimum:

- Include a list of personnel to which the plan applies.
- Describe the criteria used to determine whether an encountered resource is significant and if it should be avoided or recovered.
- Identify construction and restoration impact areas of moderate to high sensitivity for encountering paleontological resources and the shallowest depths at which those resources may be encountered.
- Describe methods of recovery, preparation, and analysis of specimens, final curation of specimens at a federally accredited repository, data analysis, and reporting.
- Identify areas with moderate to high sensitivity for encountering paleontological resources and the shallowest depths at which those resources may be encountered.
- Briefly identify and describe the types of paleontological resources that may be encountered.
- Identify the elements of a site that will lead to it requiring protection and mitigation and identify mitigation that will apply.
- Describe monitoring procedures that will take place for each component of the project that requires monitoring.
- Describe how often monitoring will occur (e.g., full-time, part time, spot checking), as well as the circumstances under which monitoring will be increased or decreased.
- Describe the circumstances that will result in the halting of work.
- Describe the procedures for halting work and notification procedures for construction and restoration crews.
- Include testing and evaluation procedures for resources encountered.
- Describe procedures for curating any collected materials.
- Outline coordination strategies to ensure that CPUC-approved paleontological consultant (MM CR-12)conduct full-time monitoring of all grading activities in sediments determined to have a moderate to high sensitivity.

- Include reporting procedures.
- Include contact information for those to be notified or reported to.

For sediments of low or undetermined sensitivity, the plan will specify what level of monitoring is necessary. Sediments with no sensitivity will not require paleontological monitoring. The plan will define specific conditions in which monitoring of earthwork activities could be reduced and/or depth criteria established to trigger monitoring. These factors will be defined by an approved (MM CR-12) paleontologist.

MM CR-12: Qualified Paleontological Consultants. The applicant will retain the services of qualified professional paleontological consultants with knowledge of the local paleontology and the minimum levels of experience and expertise as defined by the Society of Vertebrate Paleontology's Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (2010). The resumes and supporting information for each paleontological consultant will be submitted to the CPUC for approval. At least one qualified paleontological consultant must be approved by the CPUC prior to start of construction.

MM CR-13: Paleontology Construction Monitoring. Based on the Paleontological Monitoring and Treatment Plans, SCE will conduct paleontological monitoring using CPUC-approved paleontological consultant (MM CR-12). This will include monitoring any ground-disturbing activity during construction and restoration in areas determined to have high paleontological sensitivity and that have the potential to be shallow enough to be adversely affected by such earthwork as determined by the CPUC-approved paleontological consultant.

MM CR-14: Stop Work for Unanticipated Paleontological Discoveries. If previously unidentified paleontological resources are uncovered during implementation of the project, the applicant will ensure that ground-disturbing work is halted or diverted from the discovery to another location. A CPUC-approved paleontological consultant will inspect the discovery and determine whether further investigation is required. If the discovery is significant but can be avoided, and no further impacts will occur, the resource will be documented in the appropriate paleontological resource records and no further effort will be required. If the resource is significant but cannot be avoided and may be subject to further impact, the CPUC-approved paleontological consultant (MM CR-12) will evaluate the significance of the resource and implement appropriate measures in accordance with the Paleontological Monitoring and Treatment Plans.

MM CR-15: Cultural and Paleontological Resources Training Requirements. Prior to start of construction, all construction and restoration personnel involved in ground-disturbing activities and the supervision of such activities will undergo worker environmental awareness training. The cultural and paleontological resources training components of will be presented by a CPUC-approved cultural resources consultant (MM CR-3) and CPUC-approved paleontological consultant (MM CR-12). The training will describe the role of cultural and paleontological resources monitors; role of Native American monitors (if applicable); the types of cultural and paleontological resources that may be found in the proposed project area and how to recognize such resources; the protocols to be followed if cultural or paleontological resources are found, including communication protocols; and the laws relevant to the protection of cultural and paleontological resources and the associated penalties for breaking these laws. Additionally, prior to construction, CPUC-approved cultural and paleontological resources consultants will meet with the applicant's grading and excavation contractors to provide comments and suggestions concerning monitoring plans and to discuss excavation and grading plans.

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4.6 Geology, Soils, and Mineral Resources

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to geology, soils, and mineral resources. A comment received during scoping expressed concern that the proposed project is located in a seismically active area.

4.6.1 Environmental Setting

4.6.1.1 Geological Resources Studies Conducted in the Project Area

Southern California Edison (SCE, or the applicant) conducted 4 field investigations of the soil and geologic conditions in the project area between June 2000 and December 2001. The results of these studies are included in Appendix F and summarized in Table 4.6-1.

Table 4.6-1 Summary of Previous Field Investigations

Segment / Report Title	Date	Description
Segment 1: *Foundation Design Recommendations, Santa Clara-Carpinteria 66 kV T/L, Santa Clara Substation to Casitas Substation, Ventura County, California*	June 29, 2000	The field investigation consisted of a site visit to each proposed pole location between May 15 and May 18, 2000. The report also includes a review of previously prepared reports for the project area and the local geology.
Segment 2: *Foundation Design Recommendations, Santa Clara-Carpinteria 66 kV T/L, Proposed TSP Sites Located Within 5 Miles West From Casitas Substation, Existing Towers M0T2 to M4T1, Ventura County, California*	May 30, 2001	The geological and geotechnical evaluations consisted of a site visit to each proposed pole location on May 2, 2001, to evaluate any visible conditions and verify the recommendations of previous reports.
Segment 3B: *Foundation Design Recommendations From East Casitas Pass to Rincon Road SR-150, Existing Towers M4Tw to M9T1, Santa Clara-Carpinteria 66 kV T/L, Ventura County, California*	July 3, 2001	The geological and geotechnical evaluations consisted of a site visit to each proposed pole location on May 23 and 24, 2001, to evaluate any visible conditions and to estimate the subsurface soil parameters. No additional field and laboratory soil testing was conducted.
Segment 4: *Foundation Design Recommendations (Phase IV) From East Casitas Pass to Carpinteria Substation, Existing Towers M13T2 to Carpinteria Substation, Santa Clara-Carpinteria 66 kV T/L, Ventura and Santa Barbara Counties, California*	December 20, 2001	The field investigation of the soil and geologic conditions of the proposed pole locations was conducted on September 26 and 27, 2001, and October 4, 2001. The report also includes a review of previously prepared reports in the project area and the local geology.

Sources: SCE 2000; SCE 2001a,b,c
Key:
kV kilovolt
T/L transmission line

4.6.1.2 Geology

Topography

The project area is located within the geomorphic province known as the Transverse Ranges. The Transverse Ranges consist of steeply sloped, east-west trending mountain ranges and valleys bounded on the north by the Santa Ynez fault, on the east by the San Gabriel Mountains, on the south by the Transverse Ranges frontal fault zone, and on the west by the Pacific Ocean. The Transverse Ranges intersect the California coastline at an oblique angle and continue offshore to include the San Miguel, Santa Rosa, and Santa Cruz islands. The topography in the project area is heavily dissected by washes, streams, and rivers. Elevations in the project area range from approximately 1,750 feet above mean sea level (amsl) near Rincon Mountain to 50 feet amsl near Carpinteria, California.

Geologic Setting

The project area is located in a tectonically active area known as the Santa Barbara Fold Belt (SBFB). The SBFB consists of a northwest-southeast linear zone of folds and blind thrust faults (Keller 2000; Minor et al. 2009; Tan et al. 2004a, 2004b, 2003a, 2003b). The surficial geology consists of Holocene and Pleistocene age alluvium, alluvial terraces, and landslide deposits. The bedrock geology consists of marine terraces composed of mudstones, sandstones, and conglomerates ranging in age from Eocene (56 million years before present (BP)) through Pleistocene (2.6 million years BP) (Table 4.6-2).

Table 4.6-2 Bedrock Geology in the Project Area

Segment(s)	Formation Name [age]	Description
1	Santa Barbara Formation [Pleistocene]	Folded claystones
1	Undivided Pico Formation [Pliocene]	Locally pebbly, claystones, siltstones, and sandstones
1, 3B, 4	Monterey Formation [Miocene]	Siliceous and diatomaceous shales and sandstones and limestones
1, 2, 3B, 4	Rincon Shale [Miocene]	Shales and siltstones
1, 2	Vaqueros Sandstone [Early Miocene]	Locally calcareous sandstones
2, 4	Sespe Formation [Oligocene]	Locally pebbly sandstones
3A	Casitas Formation [Pleistocene]	Poorly consolidated sandstones and siltstones
4	Coldwater Sandstone [mid- to late Eocene]	Bedded arkosic sandstones with siltstones and shale interbeds

Sources: Keller 2000; Minor et al. 2009; Tan et al. 2004a, 2004b, 2003a, 2003b

Soils

The Natural Resources Conservation Service (NRCS) maintains an online database of soil survey data for most U.S. counties. Soil surveys describe the types of soils that exist in an area, their locations on the landscape, and their suitability for various uses. Soils of a similar type are grouped into soil map units, and each soil map unit differs in some respect from all others in a survey area (NRCS 2011). The major soil map unit types within the project area are presented in Table 4.6-3. Soils in the project area are generally loamy, well drained, and have high runoff rates.

Table 4.6-3 Soil Map Units within the Project Area

Soil Name	Project Component	Description/ Soil Texture (USDA)	Shrink-Swell Potential[a]	Erosion Hazard[b]	Wind Erodibility Group[c]	Hydric Rating
Rincon-Modesto-Los Osos families association	Segment 4	30 to 60 percent slopes	Moderate	Severe	8	No
Anacapa	Segment 3B	Sandy loam, 2 to 9 percent slopes	Low	Moderate	3	No
Arnold	Substation, Segment 1	Sand, 9 to 50 percent slopes	Low	Severe	1	No
Badland	Segment 1	-	NA	Severe	-	No
Botella Variant	Segment 4	Clay loam, 2 to 9 percent slopes, Eroded	Moderate	Moderate	7	No
Botella Variant	Segment 4	Clay Loam, 9 to 15 percent slopes, eroded	Moderate	Moderate	7	No
Calleguas	Segments 1, 3B, and 4	Shaly loam, 30 to 50 percent slopes	Low	Severe	7	No
Camarillo, Variant	Substation, Segments 3A and 4	Fine sandy loam	Moderate	Slight	3	Yes
Calleguas-Arnold complex	Substation	30 to 50 percent slopes, eroded	NA	NA	7	No
Castaic-Balcom complex	Segment 1	30 to 50 percent slopes, eroded	Moderate	Severe	7	No
Cropley	Segment 1	Clay, 2 to 9 percent slopes	High	Moderate	7	No
Diablo	Substation	Clay, 9 to 15 percent slopes	NA	NA	7	No
Diablo	Segment 1	Clay, 9 to 15 percent slopes	High	Severe	7	No
Diablo	Segments 1 and 3B	Clay, 15 to 30 percent slopes	High	Severe	7	No
Diablo	Substation, Segments 1 and 3B	Clay, 30 to 50 percent slopes	High	Severe	7	No
Elder	Segments 3B and 4	Sandy loam, 2 to 9 percent slopes	Low	Moderate	-	No
Garretson	Substation	loam, 2 to 9 percent slopes	NA	NA	5	No
Gaviota-Rock Outcrop Complex	Segment 4	50 to 75 percent slopes	Low	Severe	3	No
Goleta	Substation, Segments 3A and 4	Fine sandy loam, 0 to 2 percent slopes	NA	NA	3	No
Landslides	Segment 1	-	NA	Severe	-	No

Table 4.6-3 Soil Map Units within the Project Area

Soil Name	Project Component	Description/ Soil Texture (USDA)	Shrink-Swell Potential[a]	Erosion Hazard[b]	Wind Erodibility Group[c]	Hydric Rating
Lodo-Rock Outcrop Complex	Segment 4	50 to 75 percent slopes	Moderate	Severe	5	No
Lodo-Sespe Complex	Segment 4	50 to 75 percent slopes	Moderate	Severe	5	No
Linne	Segments 1 and 3B	Silty clay loam, 30 to 50 percent slopes, eroded	Moderate	Severe	4L	No
Lodo	Segment 3B	Rocky loam, 30 to 50 percent slopes	Low	Severe	6	No
Los Osos	Segment 3B and 4	Clay loam, 9 to 15 percent slopes, eroded	High	Moderate	6	No
Los Osos	Segment 3B	Clay loam, 15 to 30 percent slopes, eroded	High	Severe	6	No
Los Osos	Segments 2, 3B and 4	Clay loam, 30 to 50 percent slopes	High	Severe	6	No
Malibu	Segment 3B	Loam, 30 to 50 percent slopes	Moderate	Severe	6	No
Metz	Segment 3A	Loamy sand	Low	Slight	-	No
Milpitas	Segment 3A	Stony fine sandy loam, 15 to 30 percent slopes	Moderate	Moderate	5	No
Milpitas	Segment 3A	Stony fine sandy loam, 30 to 50 percent Slopes	Moderate	Severe	5	No
Milpitas-Positas	Segment 3A	Fine sandy loams, 2 to 9 percent Slopes	Moderate	Moderate	3	No
Milpitas-Positas	Segment 4	Fine sandy loam, 9 to 15 percent slopes, eroded	Moderate	Severe	3	No
Milpitas-Positas	Segment 3A	Fine sandy loams, 15 to 30 percent slopes, eroded	Moderate	Severe	3	No
Milpitas-Positas	Segment 4	Fine sandy loams, 30 to 50 percent slopes, eroded	Moderate	Severe	3	No
Millsholm	Segments 1 and 4	Loam, 15 to 50 percent slopes	Low	Severe	6	No

Table 4.6-3 Soil Map Units within the Project Area

Soil Name	Project Component	Description/ Soil Texture (USDA)	Shrink-Swell Potential[a]	Erosion Hazard[b]	Wind Erodibility Group[c]	Hydric Rating
Millsholm-Malibu Complex	Segments 2, 3B and 4	30 to 50 percent slopes, eroded	Moderate	Severe	6	No
Mocho	Segments 1 and 3B	Loam, 2 to 9 percent slopes	Moderate	Moderate	6	No
Nacimiento	Segment 1	silty clay loam, 9 to 15 percent slopes, eroded	Moderate	Severe	7	No
Nacimiento	Segment 1	Silty clay loam, 15 to 30 percent slopes, eroded	Moderate	Severe	7	No
Nacimiento	Segments 1 and 3B	Silty clay loam, 30 to 50 percent slopes	Moderate	Severe	7	No
Nacimiento	Segment 1	Silty clay loam, 50 to 75 percent slopes	Moderate	Severe	7	No
Orthents	Segments 3A, 3B and 4	50 to 75 percent Slopes	NA	Severe	-	No
Ojai	Segment 2	Stony fine sandy loam, 2 to 15 percent slopes, eroded	Moderate	Moderate	-	No
Riverwash	Segments 1, 2 and 3B	-	Low	Slight	1	Yes
San Benito	Segment 1	Clay loam, 15 to 30 percent slopes, eroded	Moderate	Severe	6	No
San Benito	Substation and Segment 1	Clay loam, 30 to 50 percent slopes, eroded	Moderate	Severe	6	No
San Benito	Segment 4	Clay loam, 50 to 75 percent slopes	Moderate	Severe	6	No
Santa Lucia	Segment 3B	Shaly silty clay loam, 30 to 50 percent slopes	Low	Severe	8	No
Sespe	Segments 2, 3B and 4	Clay loam, 15 to 30 percent slopes, eroded	Moderate	Severe	6	No
Sespe	Segments 2, 3B and 4	Clay loam, 30 to 50 percent slopes	Moderate	Severe	6	No

Table 4.6-3 Soil Map Units within the Project Area

Soil Name	Project Component	Description/ Soil Texture (USDA)	Shrink-Swell Potential[a]	Erosion Hazard[b]	Wind Erodibility Group[c]	Hydric Rating
Soper	Segment 1 and 2	Gravelly loam, 30 to 50 percent slopes, eroded	Moderate	Severe	7	No
Sorrento	Segment 2	Sorrento loam, 0 to 2 percent slopes	Moderate	Slight	6	No
Sorrento	Segments 2 and 4	Clay loam, heavy variant, 2 to 9 percent slopes	Low	Moderate	6	No
Sorrento	Substation, Segments 3B and 4	Clay loam, heavy variant, 9 to 15 percent slopes	High	Moderate	6	No
Todos	Segment 4	Loam, 15 to 30 percent slopes, eroded	High	Severe	4	No
Todos-Lodo Complex	Segment 4	30 to 50 percent slopes, eroded	High	Severe	4	No
Water	Segment 1	Water	NA	NA	-	No

Source: NRCS 2011
Key:
NA not assessed
USDA United States Department of Agriculture
Notes:
[a] Linear extensibility of less than 3 percent = low shrink-swell potential; 3 to 6 percent = moderate potential; 6 to 9 percent = high potential; greater than 9 percent = very high potential.
[b] Erosion hazard interpreted by NRCS for unsurfaced roads and trails.
[c] Soils are assigned to wind erodibility groups based on their susceptibility to wind erosion. Soils assigned to Group 1 are the most susceptible; soils assigned to Group 8 are the least susceptible. Sources: NRCS 2008a; NRCS 2008b; NRCS 2008c; SSS 2012.

4.6.1.3 Geologic Hazards

Faulting and Seismicity

The Alquist–Priolo Earthquake Fault Zoning Act (Pub. Res. Cod. Div. 7, Ch. 2.5) requires the delineation of earthquake faults for the purpose of protecting public safety. Faults included in the Alquist–Priolo Earthquake Fault Zoning Program are classified by activity:

- Faults classified as "active" are those that have been determined to be "sufficiently active and well defined," with evidence of movement within Holocene time (CGS 2007).
- Faults classified as "potentially active" have shown geologic evidence of movement during Quaternary time (CGS 2007).
- Faults considered "inactive" have not moved in the last 1.6 million years (CGS 2007).

Many active and potentially active faults are present in the vicinity of the project area as shown in Figure 4.6-1. Alquist-Priolo Earthquake Fault Zones (A-P Zones) are designated areas within 500 feet of a known active fault trace. The Red Mountain and Pitas Point-Ventura faults are the closest mapped A-P Zones to the proposed project (approximately 1.5 and 3.6 miles south of the proposed project, respectively). No A-P Zones or other active faults cross the proposed project; however, the project is crossed by a number of potentially active faults (Table 4.6-4).

Table 4.6-4 Potentially Active Faults in the Immediate Vicinity of the Proposed Project

Fault Name	Segment Crossed	Approximate Location	Potential Earthquake Magnitude
Arroyo Parida fault	4	Western portion of Segment 4, north of the City of Carpinteria	6.5-7.3(b)
Carpinteria fault	N/A	One tenth of a mile south of Segments 3A and 3B	4.5+(b)
Mesa-Rincon Creek fault	3A, 3B	Shepard Mesa area; eastern half of Segment 3A and western end of Segment 3B	6.0 – 7.0
Red Mountain fault	1	Three quarters of a mile east of Casitas Substation	6.0-6.8
Rincon Creek fault	3B	Western end of Segment 3B near SR-150	6.0 – 7.0(a)
Oak Ridge fault	1	Eastern end of Segment 1 near Santa Clara Substation	6.5-7.5
Unnamed	1	One tenth of a mile west of the Getty Tap	N/A

Sources: SCEDC 2013a, b, c, d; Cao et al. 2003; Santa Barbara County 2010
Notes:
(a) Maximum moment magnitude (Cao et al. 2003). The moment magnitude is a measure of the size of an earthquake in terms of energy released.
(b) Maximum Credible Earthquake (Santa Barbara County 2010). The Maximum Credible Earthquake refers to the maximum earthquake potentially capable of occurring under the currently known tectonic framework.
N/A = not applicable.

Faults generally produce damage in two ways: ground shaking and surface rupture. Seismically induced ground shaking covers a wide area and is greatly influenced by the distance to the seismic source, soil conditions, and groundwater depth. Surface rupture is limited to the areas closest to the faults. Other potential hazards associated with seismically induced ground shaking include earthquake-triggered landslides and tsunamis.

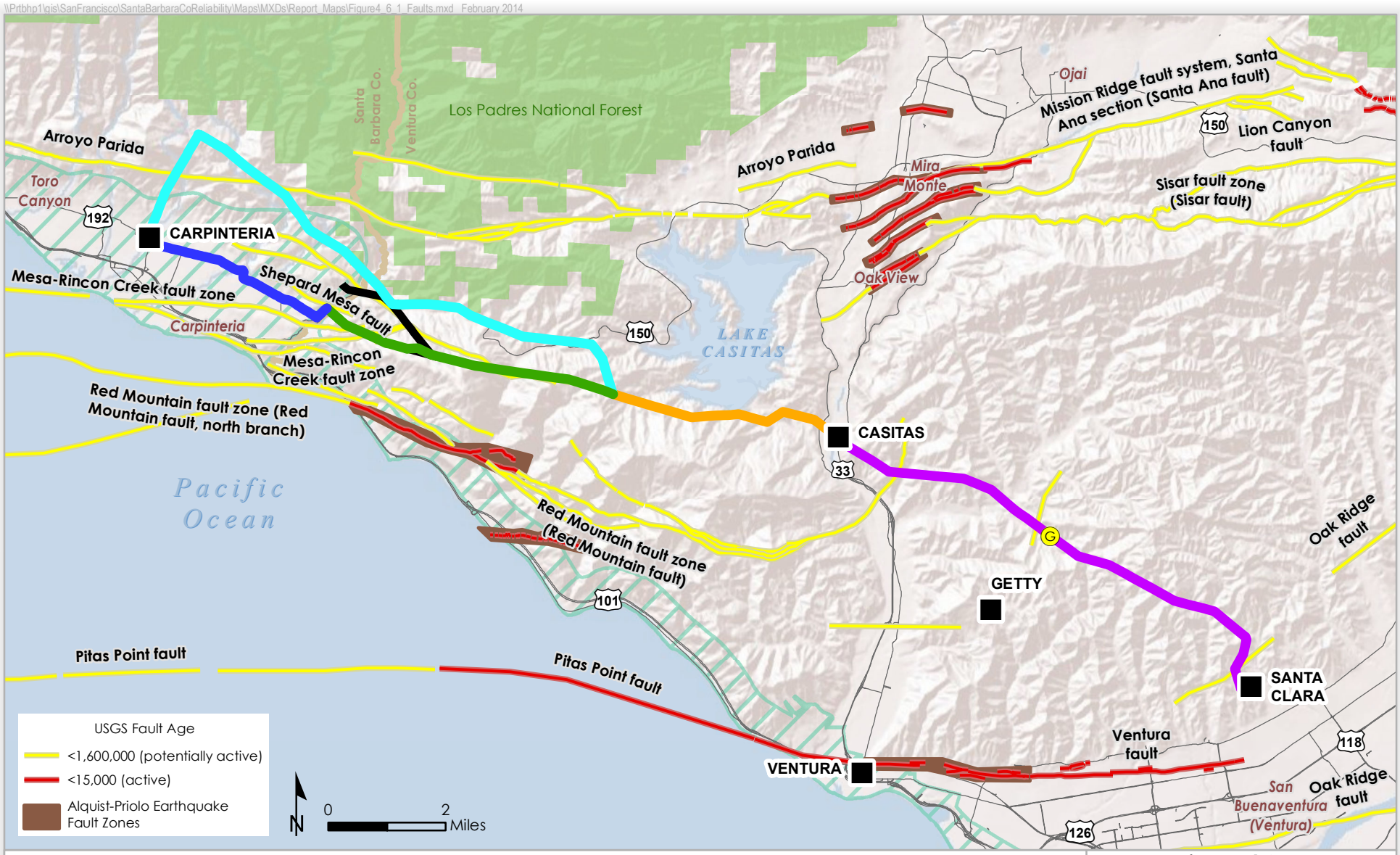


Figure 4.6-1
Faults and Alquist-Priolo Earthquake Fault Zones in the Vicinity of the Proposed Project
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

Seismic hazards in a region are estimated using statistics of earthquake occurrence to estimate the level of potential ground motion. A common parameter used for estimating ground motion at a particular location is the peak ground acceleration (PGA). PGA is a measure of earthquake intensity; it is a measure of how hard the earth shakes at a given geographic location during the course of an earthquake (USGS 2007). PGA values are typically expressed as a percentage of acceleration due to gravity: the higher the PGA value, the more intense the ground shaking.[1] Using a web tool, PGA values were calculated for a location near the center of the project area, where Segments 2, 3B, and 4 intersect (USGS 2012a) (Table 4.6-5). PGA values vary throughout the project area and would be assessed as part of a site-specific geotechnical analysis. The assessed PGA values would be used to ensure that the project is designed in compliance with applicable building codes.

Table 4.6-5 Peak Ground Acceleration Values near the Center of the Project Area

Return Period[(a)] (Years)	Peak Ground Acceleration (g)[(b)]
30	0.08937
72	0.1733
144	0.2673
475	0.4956
1485	0.8144
2475	0.9836
4950	1.2394
9900	1.5077

Notes:
(a) The return period is an indicator of the probability that the reported PGA will be exceeded at the modeled location in a given year. For example, there is a 1/144 chance that an earthquake will occur at the modeled location in a given year that has a PGA value of 0.2673g, which is roughly equal to a 10% probability of being exceeded in 14.4 years. For comparison, the Morocco earthquake of 2004 had a PGA of 0.24g (USGS 2009).
(b) PGA values were calculated for latitude 34.372317°N, longitude 119.376457°W using USGS 2008 Interactive Deaggregations (Beta) Tool (USGS 2012a). Average shear wave velocity in the upper 30 meters (VS30) value of 489 meters per second was used to calculate PGA values based on Kalkan et al. (2010).

Erosion

Water and wind are the strongest mechanisms to cause erosion to soils in the project area. Increased erosion could occur in the project area where surface disturbing activities are planned to occur. The NRCS assigns soils to Wind Erodibility Groups (WEGs) and determines an Erosion Hazard rating. The susceptibility of the soils in the project area to wind erosion ranges from WEG 1 (most highly erodible) to WEG 8 (not susceptible), with the majority of the soils being in WEG 6 and 7. Erosion hazard ratings for soils in the project area range from slight to severe with the majority of the soils having a severe rating.

Landslides

Landslides are a hazard throughout the project area. The majority of the project area within Ventura County is located within a State of California Earthquake-Induced Landslide Hazard Zone

[1] The acceleration due to gravity is relatively constant at the earth's surface: 980 centimeters per second per second (cm/sec/sec). An acceleration of 16 feet per second is 16*12*2.54 = 487 cm/sec/sec. Therefore, an acceleration of 16 feet per second = 487/980 = .50 g.

(CGS 2003a, 2003b). Santa Barbara County does not have published CGS Seismic Hazards Maps. However, due to similar geologic, topographic, and seismic conditions as in Ventura County, similar hazards of landslides exist throughout the project area in Santa Barbara County. The only portions of the proposed project that would not be at risk of seismically induced landslides are those located in the flat, lowland parts of the project area.

The applicant has conducted a number of field investigations in the recent past to assess geologic and soil conditions throughout the project area. During each of the field investigations (Table 4.6-1), the applicant observed evidence of landslides along the project right-of-way (ROW) (Appendix F):

- In the report prepared for Segment 1, the applicant noted that shallow landslides of less than 20-foot depths are common along the ROW. The applicant also noted that the area where the poles would be constructed is historically prone to landsliding and that many of the sites were damaged in 1969, 1978, 1983, and 1998 (SCE 2000).
- In the report prepared for Segment 2, the applicant noted that most of the Rincon Shale is very susceptible to landsliding. Most of the structure sites along the ROW were not located in areas that showed evidence of landsliding or slope instability, with the exception of five structure sites. In addition, an area adjacent to one of the structure sites had been noted in prior reports to be an area of major slope instability, but there was no indication that a landslide in this area would impact the structure site itself (SCE 2001a).
- In the report prepared for Segment 3B, the applicant noted that three of the proposed subtransmission structure sites showed evidence of past landsliding. Approximately 3 miles of this portion of the line lies within the Rincon Shale, and past geologic reports noted several large landslides in this area. Immediately west of West Casitas Pass, there is an active landslide that is about 1 mile in length and half a mile in width that tends to move, at least in part, each year (SCE 2001b).
- In the report prepared for Segment 4, the applicant noted that at most of the proposed structure sites there is no indication of the existence or likelihood of future landsliding, with the exception of an area of active soil slumping between two of structure sites. In addition, the applicant noted that a portion of the corridor passes north of an active landslide (SCE 2001c).

In addition, the applicant recently removed four structures on the idle Santa Clara-San Marcos 66-kilovolt Subtransmission Line. One structure was removed due to concerns that an exposed footing could lead to structure failure, and the other three structures were removed due to unstable ground or because the towers were located in unsuitable locations to terminate the conductor (SCE 2013).

Liquefaction

Liquefaction occurs when saturated sandy soil loses strength and cohesion due to ground shaking during an earthquake. Portions of the project area within the Ventura River Valley and along Coyote Creek are located in a State of California Liquefaction Seismic Hazard Zone (CGS 2003b). Within the Carpinteria Valley, portions of Segments 3A and 4 would be located within an area at moderate risk of liquefaction (City of Carpinteria 2003; Santa Barbara County 2010).

Subsidence

Ground subsidence has not been observed in the vicinity or within the project area. However, ground subsidence has been observed about 8 miles southeast of the project area within the Oxnard Plain of Ventura County (Santa Barbara County 2010; Ventura County 2011a; City of Carpinteria 2003).

Expansive and Collapsible Soils

Some soils contain certain clay minerals that may cause them to swell when moist and shrink as the soil dries. These soils are known as "expansive soils." Expansive soils have the potential to disturb building foundations, walls, and roads and are found occasionally throughout the project area. In areas where soils have moderate to high shrink-swell potential, project components may require special design features to prevent damage (Table 4.6-3).

4.6.1.4 Mineral Resources

The project area is located in a region that has been used for oil exploration and production since the mid-1800s. Portions of the Ventura (approximately 2,380 wells) and Rincon (approximately 640 wells) oil fields are located less than 1 mile south of portions of Segments 1 and 2 and the Casitas Substation. There are no producing oil or gas wells within the project ROW (CDC 2013).

In addition to oil and gas, a number of other resources have been mined in the vicinity of the project area. Aggregate and clay resources are currently mined in the vicinity of the project area (USGS 2012b). The Los Prietos mercury deposits northwest of the City of Carpinteria have been intermittently mined since 1860, but mining was not active as of 2010 (USDI 1965; Santa Barbara County 2010). Uranium has been identified north of the project area. However, no active mines are known to exist within the project area; the nearest mineral resources to the proposed project are aggregate resources currently mined at the Santa Barbara Portable Plant in Casitas Springs and at a number of pits located along the Santa Clara River to the south of the Santa Clara Substation in Ventura County (USGS 2012b).

4.6.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern geology, soils, and mineral resources in the project area.

4.6.2.1 Federal

1997 Uniform Building Code

The 1997 Uniform Building Code (UBC) specifies acceptable design criteria for structures with respect to seismic design and load-bearing capacity. Seismic Risk Zones have been developed based on the known distribution of historic earthquake events and frequency of earthquakes in a given area. These zones are generally classified on a scale from I (least hazard) to IV (most hazard). These values are used to determine the strengths of various components of a building required to resist earthquake damage. Based on the UBC Seismic Zone Maps of the United States, and because of the number of active faults in southern California, the proposed project would be located in the highest seismic risk zone defined by the UBC standard: UBC Zone IV. The state has adopted these provisions in the California Building Code (CBC).

Clean Water Act of 1972, as amended in 2002

The Clean Water Act (CWA; 33 U. S. Code §1251 et seq.) requires states to set standards to protect water quality, including the regulation of storm water and wastewater discharge during construction and operation of a facility. This includes the creation of the National Pollutant Discharge Elimination System (NPDES), a system that requires states to establish discharge standards specific to water bodies and that regulates storm water discharge from construction sites through the implementation of a Storm Water Pollution Prevention Plan (SWPPP). Erosion and sedimentation control measures are fundamental components of SWPPPs. In California, the NPDES permit program is implemented and administered by Regional Water Quality Control Boards. Refer to Section 4.9, "Hydrology and Water Quality," for further information.

As authorized by Section 402 of the CWA, the California State Water Resources Control Board administers the NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (General Construction Activity NPDES Storm Water Permit, 2009-0009-DWQ and 2010-0014-DWQ) that covers a variety of construction activities that could result in wastewater discharges. Under this General Permit, the state issues a construction permit for projects that disturb more than one acre of land. To obtain the permit, applicants must notify the State Water Resources Control Board of the construction activity by providing a Notice of Intent, develop a SWPPP, and implement water quality monitoring activities as required. The purpose of a SWPPP is to ensure the design, implementation, management, and maintenance of Best Management Practices (BMPs) aimed at reducing the amount of sediment and other pollutants in storm water discharges associated with the land disturbance activities.

4.6.2.2 State

Alquist-Priolo Earthquake Fault Zoning Act

The purpose of the Alquist-Priolo Earthquake Fault Zoning Act of 1972 is to regulate development near active faults to minimize the hazards associated with a surface fault rupture. This act requires disclosure to potential real estate buyers and a 50-foot setback for new occupied buildings. While the act does not specifically regulate overhead power lines, it helps define areas where fault rupture is most likely to occur. The act defines an active fault as one that exhibits evidence of surface rupture within the last 11,000 years (i.e., Holocene activity). The state has identified active faults within California and has delineated "earthquake fault zones" along active faults.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 provides a statewide seismic hazard mapping and technical advisory program to assist cities and counties in fulfilling their responsibilities for protecting public health and safety from the effects of strong ground shaking, liquefaction, landslides, or other ground failure and seismic hazards caused by earthquakes. Mapping and other information generated pursuant to the Seismic Hazards Mapping Act is to be made available to local governments for planning and development purposes. The state requires that (1) local governments incorporate site-specific geotechnical hazard investigations and associated hazard mitigation as part of the local construction permit approval process; and that (2) the agent for a property seller, or the seller if acting without an agent, must disclose to any prospective buyer if the property is located within a Seismic Hazard Zone. The State Geologist is responsible for compiling seismic hazard zone maps.

California Building Code

The 2013 CBC was adopted by the California Building Standards Commission and became effective January 1, 2014. The CBC is contained in Title 24 of the California Code of Regulations, California Building Standards Code and is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes.
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions.
- Building standards authorized by the California legislature that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns.

The code includes grading and other geotechnical issues, building specifications, and non-building structures. The proposed project would include these types of improvements, and therefore, the building code would be applicable.

4.6.2.3 Regional and Local

Santa Barbara County

Santa Barbara County's geologic and seismic protection standards are outlined in the Seismic Safety & Safety Element of Santa Barbara County's General Plan (Santa Barbara County 2010). The geologic and seismic protection standards outlined in the general plan are designed to demonstrate compliance with California State laws. The standards are in place to protect the community from geologic and seismic hazards originating from natural or anthropogenic sources. The Seismic Safety & Safety Element provides important data regarding geologic, soil, seismic, fire, and flood hazards that is intended to guide land use planning. The Seismic Safety & Safety Element also includes the Safety Element supplement, which describes land use planning measures to reduce the risk of public exposure to acutely hazardous materials associated with oil and gas pipelines and fixed facilities. Applicable Santa Barbara County General Plan policies regarding geology, soils, and minerals include:

- **Geologic and Seismic Protection Policy 1**: The County shall minimize the potential effects of geologic, soil and seismic hazards through the development review process
- **Geologic and Seismic Protection Policy 2:** To maintain consistency, the County shall refer to the California Building Code, the Land Use Development Code, County Ordinances, the Coastal Land Use Plan, and the Comprehensive General Plan when considering the siting and construction of structures in seismically hazardous areas.
- **Geologic and Seismic Protection Policy 5:** Pursuant to County Code Section 21-7(d)(4) and (5), the County shall require a preliminary soil report prepared by a qualified civil engineer be submitted at the time a tentative map is submitted. This requirement may be waived by the Planning Director if he/she determines that no preliminary analysis is necessary. A preliminary geological report prepared by a qualified engineering geologist may also be required by the Planning Director.

- **Geologic and Seismic Protection Policy 6:** The County should reference the Santa Barbara County Multi-Jurisdiction Hazard Mitigation Plan when considering measures to reduce potential harm from seismic activity to property and lives.
- **Geologic and Seismic Ongoing Implementation measure**: **5. Maintain and Enforce County Code Chapter 14-Grading, Erosion and Sediment Control:** Continue maintenance and enforcement of County Code Chapter 14-Grading, Erosion and Sediment Control whose regulations, conditions and provisions constitute minimum standards and procedures necessary to protect and preserve life, limb, health, property and public welfare. The Chapter regulates new grading (excavations, i.e. cuts, fills, borrow pits, stockpiling, and compaction of fill) where the transported amount of materials exceeds 50 cubic yards or the cut or fill exceeds 3 feet in vertical distance to the natural contour of the land.

Ventura County

The Hazard appendix of the Ventura County General Plan provides background information and technical details regarding individual hazards addressed in the General Plan Goals, Policies and Programs. The physical, social and other effects of the hazards are discussed, and more detailed information is provided regarding the location of hazards zones and areas (Ventura County 2011a). A number of policies presented in the Hazards chapter of the Ventura County's General Plan Goals, Policies, and Program Element are directed at reducing geology and soils hazards (Ventura County 2011a), including the following applicable policies:

- **Policy 2.4.2:** Prior to the issuance of building or grading permits for essential facilities, special occupancy structures, two-story single family residences, or hazardous materials storage facilities located within areas prone to liquefaction, a geotechnical report that includes a seismic analysis and evaluation of liquefaction in accordance with the State of California Guidelines shall be prepared in order to assess the liquefaction potential and provide recommendations for mitigation.
- **Policy 2.7.2:** 1.) Development in mapped landslide/mudslide hazard areas shall not be permitted unless adequate geotechnical engineering investigations are performed, and appropriate and sufficient safeguards are incorporated into the project design. 2.) In landslide/mudslide hazard areas, there shall be no alteration of the land which is likely to increase the hazard, including concentration of water through drainage, irrigation or septic systems, removal of vegetative cover, and no undercutting of the bases of slopes or other improper grading methods. 3.) Drainage plans that direct runoff and drainage away from slopes shall be required for construction in hillside areas.
- **Policy 2.8.2:** 2.) A geotechnical report, prepared by a registered civil engineer and based upon adequate soil testing of the materials to be encountered at the sub-grade elevation, shall be submitted to the County Surveyor, Environmental Health Division, and Building and Safety for every applicable subdivision and Building Permit application (as required by the California Building Code).

Ventura County's Initial Study Assessment Guidelines present threshold criteria and standard methods used to determine whether a project could have a significant effect on the environment (Ventura County 2011b). Threshold criteria and standard methods applicable to assessment of geology and soils include the following:

- **Fault Rupture:** If the project is located within any of the following areas:

- State of California designated Alquist-Priolo Special Fault Study Zone,
- County of Ventura designated Fault Hazard Area.

- **Liquefaction:** The State of California Seismic Hazard Zones Maps are utilized for all determinations for liquefaction potential. A proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving liquefaction if it is located within a Seismic Hazards Zone.
- **Landslide/Mudflow:** The threshold for landslide/mudflow hazard is determined by the Public Works Agency Certified Engineering Geologist based on the location of the site or project within, or outside of mapped landslides, potential earthquake induced landslide zones, and geomorphology of hillside terrain.
- **Expansive Soils:** The determination of a significant soils expansion effect shall be based upon an inquiry of whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving soil expansion if it is located within a soils expansive hazard zone or where soils with an expansion index greater than 20 are present.
- **Subsidence:** The determination of a significant subsidence effect shall be based upon an inquiry of whether a proposed project will expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving subsidence if it is located within a subsidence hazard zone.

City of Carpinteria

The Safety Element and the Open Space, Recreation, and Conservation Element of the Carpinteria General Plan and Local Coastal Program presents the long-term objectives, policies, and implementation measures applicable to the assessment of geology and soils including, soil erosion, faults, seismic and slope stability hazards, and soil hazards. The applicable policy includes:

- **OSC-9c.** Minimize soil erosion and polluted runoff during construction and operation of the land use.

4.6.3 Impact Analysis

4.6.3.1 Methodology and Significance Criteria

Information and data from available published resources—including journals, maps, and government websites—were collected and reviewed. The results of previous field investigations contained within Appendix F were also considered. This information was evaluated within the context of applicable federal, state, and local laws, regulations, standards, and policies.

The following significance criteria were defined based on the checklist items in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. An impact is considered significant if the project would:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on

other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42;

ii. Strong seismic ground shaking;

iii. Seismic-related ground failure, including liquefaction; or

iv. Landslides.

b) Result in substantial soil erosion or the loss of topsoil;

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

d) Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property;

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;

f) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or

g) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Significance criteria (e), (f), and (g) do not apply to the proposed project. Septic tanks would not be constructed as part of the proposed project; therefore, significance criterion (e) is not applicable. No producing oil/gas wells or active mines are located within areas that would be temporarily or permanently disturbed during construction or operation of the project. The proposed project would be located in the vicinity of the Ventura and Rincon oil fields, but the nearest wells to any of the project features are about 1 mile south. There are several active sand and gravel mines in the vicinity of the proposed project, but the construction of the proposed project would not restrict access or otherwise impede development of these resources. No other mineral resources of value to the region or residents of California, or locally important mineral resource recovery sites, are known to occur within the vicinity of the proposed project. Therefore, significance criteria (f) and (g) are not applicable.

4.6.3.2 Applicant Proposed Measures

The applicant has committed to the following applicant proposed measure (APM) as part of the design of the proposed project:

APM GEO-1: Based on the findings of the geotechnical analysis, the applicant would design project components to minimize the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Measures that may be used to minimize impacts could include, but are not limited to, stabilization fills, retaining walls, slope coverings, removal of unstable materials, avoidance of highly unstable areas, construction of pile foundations, ground improvements of liquefiable zones, installation of flexible bus connections, and incorporation of slack in cables.

4.6.3.3 Environmental Impacts

Impact GEO-1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault.
LESS THAN SIGNIFICANT

There are no proposed project components within an A-P Zone. The nearest A-P Zone in relation to proposed project components is approximately 1.5 miles south of the location where Segments 3A and 3B meet (Figure 4.6-1). Although there are seven potentially active faults in the immediate vicinity of the project (As shown in Table 4.6-4), none of these faults show evidence of displacement within the last 15,000 years. Additionally, no proposed project components are within County of Ventura designated Fault Hazard Area (Ventura County 2013). As required by the Seismic Hazards Mapping Act, geotechnical investigations were prepared by a certified engineering geologist with competence in the field of seismic hazard evaluation and mitigation (SCE 2000; 2001a-c). The geotechnical report contains site-specific evaluations of the seismic hazard(s) affecting the proposed project. The geotechnical report also includes information on the potential for rupture of a known earthquake fault. With the implementation of APM GEO-1, final design criteria would reduce any impacts related to earthquake fault ruptures during construction and operation of the proposed project. Accordingly, any impact under this criterion would be less than significant.

Impact GEO-2: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.
LESS THAN SIGNIFICANT

The proposed project would be located in a seismically active area, in close proximity to active and potentially active fault zones. Therefore, the project could experience moderate to high levels of earthquake-induced ground shaking. However, with the exception of the westernmost and easternmost portions of the proposed project, most of the proposed project components would be located in sparsely populated areas, and none of the proposed project components would be used for human occupancy. The subtransmission structures would be designed in accordance with CPUC GO 95, which requires overhead line construction to be capable of withstanding wind, temperature, and wire tension loads. Accounting for these factors would contribute to a design adequate to withstand expected seismic loading. In addition, the results of the geotechnical investigation and geotechnical soil borings would be used to inform the design of project components and ensure compliance with applicable CBC standards, which require structures and permanently attached nonstructural components be designed and built to resist the effects of earthquakes. With the implementation of APM GEO-1, final design criteria would reduce any impacts related to strong seismic ground shaking during construction and operation of the proposed project. Therefore, impacts under this criterion would be less than significant.

Impact GEO-3: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.
LESS THAN SIGNIFICANT

Liquefaction hazards are considered to be low in all areas of the proposed project except in portions of Segments 1 and 2 along Coyote Creek and within the Ventura River Valley and along portions of Segments 3A and 4 within the Carpinteria Valley. The short portions of Segments 1 and 2 along Coyote Creek would be located within a State of California Liquefaction Seismic Hazard

Zone (CGS 2003b); however, the work to be performed in these areas includes foundation removal and the addition of telecommunications cable. No new structures would be constructed in these areas. Approximately 0.4 miles of the westernmost portion of Segment 4 and approximately 2.8 miles of the westernmost portion of Segment 3A within the Carpinteria Valley would be within an area with a moderate risk of liquefaction (City of Carpinteria 2003; Santa Barbara County 2010). However, based on the results of the past geotechnical investigation, and as part of additional geotechnical investigations that would be implemented under APM GEO-1, the applicant would design project components to minimize potential for liquefaction and incorporate ground improvements in liquefiable zones. Therefore, impacts under this criterion would be less than significant without mitigation.

Impact GEO-4: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.

LESS THAN SIGNIFICANT WITH MITIGATION

The majority of the project components would be located in areas with rugged topography, steep slopes, and highly unstable bedrock. As a result, landslides (seismically induced or otherwise) are a potential hazard throughout most of the project area. Portions of Segments 3A, 3B, and 4 would be located in a part of the project area with the highest potential for landslide to occur. As noted in Section 4.6.1.2, numerous landslides have been documented throughout the project area during past geotechnical field investigations conducted by the applicant. Prior to construction, the applicant would conduct additional site-specific geotechnical investigations and use the results to inform grading plans, the location of subtransmission structures, and the design of subtransmission structure foundations. In areas with high potential for landslides to occur, the subtransmission structures would be located down the ridge line, instead of at the peak of the ridge, to reduce the potential for a landslide to compromise the structure foundation. The subtransmission structure foundations would be designed to withstand lateral loads greater than the anticipated lateral loads that may result from a landslide at each structure location.

Current project designs include a number of new retaining walls to be constructed along existing access roads and new spur roads. In addition, based on the results of the geotechnical investigation and as part of implementing APM GEO-1, the applicant would design the project to avoid highly unstable areas, remove unstable materials, and incorporate design features such as stabilization fills, retaining walls, and slope coverings to avoid potential adverse effects to people or structures resulting from a landslide or reduce the potential for a landslide to occur.

Due to the potential of a landslide to occur during the operational life of the proposed project, Mitigation Measure (MM) GEO-1 would be required. MM GEO-1 describes specific maintenance reporting procedures. During operations, the implementation of MM GEO-1 would minimize potential impacts resulting from landslides by pro-actively identifying areas that exhibit characteristics of slope instability. Therefore, impacts under this criterion would be less than significant with mitigation.

Impact GEO-5: Result in substantial soil erosion or the loss of topsoil.

LESS THAN SIGNIFICANT

Soils in the project area are generally loamy with varying proportions of clay, silt, sand, and gravel/cobbles/stones. Most of the soils within the project area have an erosion hazard rating of severe. However, the applicant would use information about the physical properties of subsurface soils, soil resistivity, and slope stability data from the geotechnical study to inform development of

a SWPPP. The SWPPP would include a variety of erosion and sediment controls to reduce the potential for increased erosion and sedimentation that could result from construction or operation of the project. Erosion controls consist of source control measures that are designed to prevent soil particles from detaching and being transported in storm water runoff. The SWPPP would require the applicant to schedule major grading operations during non-rainy periods, preserve existing vegetation to the maximum extent feasible, and apply soil binders, where appropriate, to areas that would remain disturbed for more than two weeks. The SWPPP would also require the applicant to install erosion control devices, where appropriate, such as straw mulch, geotextiles and mats, earth dikes and drainage swales, velocity dissipation devices (at culvert outlets), slope drains, and streambank stabilization to reduce erosion potential during construction.

In addition to the erosion controls, the SWPPP would require the applicant to implement sediment controls, which are structural measures intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Examples of sediment control measures include silt fences, sediment traps, check dams, fiber rolls, gravel bag berms, street sweeping and vacuuming, and sandbag barriers. These measures would be implemented at appropriate locations throughout the project area.

During operations, long-term use of access roads may lead to rutting, which could concentrate runoff and increase rill erosion. However, the applicant would regularly maintain water bars and other erosion control features that would be implemented as part of the SWPPP during operations.

The BMPs and measures identified in the SWPPP would be employed during all land-disturbing activities resulting from construction and/or operation of the proposed project. Therefore, impacts under this criterion would be less than significant without mitigation.

Impact GEO-6: Be located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

LESS THAN SIGNIFICANT WITH MITIGATION

The project area is located predominantly within a State of California Earthquake-Induced Landslide Hazard Zone or in areas where similar geologic, topographic, and seismic conditions indicate a high risk of landslides. The only portions of the project area where new structures would be installed that would not be at risk of seismically induced landslides are portions along Segments 3A and 4 in the flat, lowland areas of the Carpinteria Valley. While these portions of the proposed project would be located within an area at moderate risk of liquefaction and lateral spreading (City of Carpinteria 2003; Santa Barbara County 2010), there are no known historic occurrences of liquefaction within Santa Barbara County (Santa Barbara County 2010). The project area is also devoid of any areas known to have a risk of subsidence or soil collapse.

The majority of the project components would be sited on naturally unstable geologic units and soils with high erosion potential. Areas where the natural slope is over-steepened by the construction of access roads, subtransmission structure foundations, or other excavated areas would have increased landslide susceptibility. However, current project designs include retaining walls and erosion control devices (e.g., water bars) to combat slope instability and erosion. The SWPPP would require additional site-specific erosion control measures. In addition, based on the results of the geotechnical investigation and as part of implementing APM GEO-1, the applicant would design the project to avoid highly unstable areas, remove unstable materials, and incorporate design features such as stabilization fills, retaining walls, and slope coverings to avoid

potential adverse effects to people or structures resulting from a landslide or reduce the potential for a landslide to occur. During operations, the applicant's implementation of MM GEO-1 would minimize potential impacts resulting from landslides by pro-actively identifying areas that exhibit characteristics of slope instability.

Liquefaction and lateral spreading could result in lowland areas where saturated sandy soil loses strength and cohesion due to ground shaking during an earthquake. In these areas, based on the results of the geotechnical investigation and as part of implementing APM GEO-1, the applicant would design project components to minimize potential for liquefaction and incorporate ground improvements in liquefiable zones.

With the incorporation of project design features, implementation of the SWPPP, and the incorporation of APM GEO-1, as well as the incorporation of MM GEO-1, construction and operational impacts associated with landslides, liquefaction, and/or lateral spreading would be less than significant. Because no areas of subsidence or soil collapse are known or expected to occur within the project area, construction or operation impacts associated with the risk of subsidence and soil collapse would be less than significant with mitigation.

Impact GEO-7: Be located on expansive soil, creating substantial risks to life or property. LESS THAN SIGNIFICANT

Expansive soils (e.g., those with high-plasticity clay content) can cause structural failure of foundations such as those associated with the proposed project components. The shrink-swell potential is an indicator of the potential for encountering expansive soil within a soil map unit (Table 4.6-2). The shrink-swell potential of soil map units throughout the project area varies, but the shrink-swell potential of most soil map units is moderate.

The applicant would use the results of the geotechnical investigation (as described in APM GEO-1) to inform the final engineering designs of foundations and other structures that may be impacted by expansive soils. The project would also be required to comply with all applicable building codes. Therefore, impacts under this criterion would be less than significant without mitigation.

4.6.4 Mitigation Measures

MM GEO-1: During operations, the applicant will conduct annual, or more often as needed maintenance patrols to identify areas of active slope instability and submit an annual report to the CPUC. Any areas of slope instability that could potentially affect project facilities (e.g., access roads, subtransmission structures, etc.) will be addressed on a case-by-case basis to minimize on- and off-site impacts.

4.7 Greenhouse Gas Emissions

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to climate change and greenhouse gas (GHG) emissions. Climate Action Plans, Climate Adaptation Plans, and other relevant local and regional plans are addressed in this section and in Sections 4.3, "Air Quality"; 4.8, "Hazards and Hazardous Materials"; and 4.15, "Transportation/Traffic."

4.7.1 Environmental Setting

The term "climate change" refers to "any significant change in measures of climate (such as temperature, precipitation, or wind) that lasts for an extended period (decades or longer)" (EPA 2011). This term is often used interchangeably with the term "global warming." Climate change, or global warming, is the term used to describe an average increase in the temperature of the atmosphere near the earth's surface and in the troposphere, which can contribute to changes in global climate patterns. The global distribution of temperature increase has varied, and in some locations average temperatures have actually decreased. Climate change has been attributed to a variety of causes, including both natural and human activity (EPA 2011). Current scientific research indicates that potential effects of climate change include variations in temperature and precipitation, sea-level rise, impacts on biodiversity and habitat, impacts on agriculture and forestry, and human health and social impacts (CNRA 2009).

Greenhouse Gases

GHGs are gases that allow solar radiation to pass through the earth's atmosphere but prevent heat from escaping, resulting in atmospheric warming. Certain GHGs occur naturally and help balance the earth's temperature; however, research indicates that, since the advent of the Industrial Revolution, human activity has resulted in an elevated concentration of some of these gases in the atmosphere. In particular, concentrations of carbon dioxide (CO_2) (from the burning of fossil fuels) have increased significantly.

Much of the carbon in the atmosphere is absorbed by natural "carbon sinks," such as forests or ocean kelp; CO_2 is then emitted into the atmosphere through natural processes such as animal and plant respiration and oceanic and geological activity. These natural processes represent "sources." When balanced, the amount of CO_2 emitted from sources and absorbed by carbon sinks is roughly equal (a process known as the "carbon cycle"). However, as emission levels rise from human activity such as automobile use, carbon sinks become overwhelmed and are unable to sequester the increasing amounts of CO_2. In addition, other human activity such as deforestation can lead to the reduction of sinks. The resulting increase in GHGs in the atmosphere is now considered one of the key causes of global climate change.

In 1988, the World Meteorological Organization and United Nations formed the Intergovernmental Panel on Climate Change (IPCC) as a joint effort to assess the impact of human activity on the global climate. In 1990, the IPCC issued its first assessment report, which helped identify climate change as a serious issue and laid the groundwork for the formation of the United Nations Framework Convention on Climate Change (UNFCCC). The second assessment report, issued by the IPCC in 1995, contributed to the drafting of the Kyoto Protocol, which was adopted by the UNFCCC in 1997. The Kyoto Protocol asked signatories to the UNFCCC to commit to reducing emissions of four

primary GHGs (CO_2, methane [CH_4], nitrous oxide [N_2O], and sulfur hexafluoride [SF_6]), and two secondary groups of GHGs (hydrofluorocarbons [HFCs] and perfluorocarbons [PFCs]) to 5 percent below 1990 emission levels by 2012. At the time of this writing, the United States remains the only signatory to the UNFCCC that has not ratified the Kyoto Protocol. The IPCC issued its most recent assessment report in 2007 and is currently working on the fifth assessment report, which will be completed in 2013/2014 (IPCC 2011).

In 2006, the State of California enacted the California Global Solutions Warming Act of 2006 (Assembly Bill [AB] 32), requiring a reduction in GHG emissions in the state to 1990 levels by 2020. AB 32 targets the same GHGs identified under the Kyoto Protocol. These gases are described further below.

Carbon Dioxide

CO_2 is a colorless, odorless gas generated by both natural and human activity. Natural sources of CO_2 include respiration by bacteria, fungus, and animals; decomposition of organic matter; evaporation of ocean water; and geological processes. The primary human-induced sources of CO_2 are combustion of fossil fuels, natural gas, and wood.

Methane

CH_4 is a highly flammable gas that is a primary component of natural gas. Similar to CO_2, CH_4 is produced both by natural and human activity. Natural sources of CH_4 include anaerobic decay of organic matter, geological deposits (e.g., natural gas fields), and cattle. Human-induced sources include emissions generated by the decay of organic material in landfills and fermentation of manure and other organic material.

Nitrous Oxide

As with CO_2 and CH_4, N_2O is produced by both natural and human activity. Natural sources include microbial action in soil and water, particularly at tropical latitudes. Human-induced sources include emissions from manufacturing facilities, fossil fuel power plants, and motor vehicles.

Sulfur Hexaflouride

SF_6 is a colorless, odorless, non-flammable, non-toxic gas used mainly as an insulator (when mixed with other gases, such as argon) in the manufacture of electronics.

Hydrofluorocarbons

HFCs are human-made compounds consisting of carbon, hydrogen, and fluorine atoms. HFCs were introduced as replacements for atmospheric ozone–depleting chemicals in various industrial and commercial applications. They are used in solvents, refrigerants, firefighting agents, and aerosol sprays.

Perfluorocarbons

PFCs are human-made chemicals consisting of carbon and fluorine atoms. As with HFCs, PFCs were introduced as an alternative to atmospheric ozone–depleting chemicals and are used in similar industrial and commercial applications.

Global Warming Potential

The effect of a particular GHG on global climate change depends on its global warming potential (GWP). Table 4.7-1 shows the GWP for the six GHGs described above. GWP is determined by a number of factors, including a GHG's molecular structure, its ability to absorb infrared radiation, and the amount of time it can exist in the atmosphere before breaking down. These factors help determine the amount of warming potential a pound of GHG would have relative to a pound of CO_2. For example, a pound of CH_4 has 21 times the warming potential of a pound of CO_2.

Table 4.7-1 Global Warming Potential For Greenhouse Gases

Greenhouse Gas	Global Warming Potential (relative to CO_2)
Carbon Dioxide (CO_2)	1
Methane (CH_4)	21
Nitrous Oxide (N_2O)	310
Hydrofluorocarbons (HFCs)	140–11,700
Perofluorocarbons (PFCs)	6,500–9,200
Sulfur Hexafluoride (SF_6)	23,900

Source: IPCC 2007

The California Air Resources Board (CARB) reports that CO_2 represents almost 90 percent of the GHG emissions produced in California (CARB 2008). Because CO_2 is such a prevalent GHG, and the GWP for other GHGs is calculated relative to CO_2, GHGs in the atmosphere are reported in terms of CO_2 equivalency (CO_2e). CO_2e measures GHGs by multiplying the mass of each GHG emitted by its GWP to determine the equivalent amount of CO_2. For example, 1 pound of CH_4 is equivalent to 21 pounds of CO_2.

Potential Effects from Climate Change

In 2008, California Governor Arnold Schwarzenegger issued Executive Order S-13-08, directing the California Natural Resources Agency (CNRA) to determine how state agencies can respond to the challenges posed by climate change. As a result, the CNRA worked with several state agencies to draft the 2009 California Climate Adaptation Strategy (CCAS). A summary of the potential effects of climate change, as identified in the CCAS, is presented below.

Temperature and Precipitation

GHGs can remain in the atmosphere for decades; thus, the temperature changes over the next 30 to 40 years will largely be determined by past emissions. By 2050, temperatures could increase by an additional 1.8 to 5.4 degrees Fahrenheit (CNRA 2009). California would likely continue to have relatively cool wet winters and dry hot summers; however, temperature increases could become more severe in summer than winter, and inland areas could experience more pronounced warming than coastal regions. Heat waves could also increase in frequency and intensity.

Precipitation patterns are anticipated to change due to increasing temperatures, leading to more rainfall and less snow. This would affect California's drinking water supply, which currently originates mainly as snowmelt runoff. More frequent flood events, due to faster runoff, could also increase stress on state and local infrastructure. Finally, these changes in precipitation could lead to more periods of drought, which could have a negative effect on native ecosystems.

Sea-Level Rise

Recent studies show that sea levels rose by as much as 7 inches during the 20th century and are anticipated to rise up to 55 inches by the end of this century (CNRA 2009). Furthermore, even if emissions were substantially lowered, research shows that sea levels will continue to rise; thus, adaptation strategies will be an important part of dealing with this impact (CNRA 2009). Sea-level rise could have a negative effect on coastal wetlands and marshes through inundation and could also damage agricultural activities by way of salt water intrusion into fresh water aquifers. Additionally, loss of these habitats as a storm buffer could increase storm-related impacts, such as depleted beaches and property damage.

Biodiversity and Habitat

As temperatures and precipitation patterns change, plant and animal species adapted to specific conditions could become threatened. These species may have to shift their geographic range to adapt to the changes; however, if the species are unable to adapt, they may face extinction. As the climate shifts, changes in wildfire patterns may also emerge. While many species in California are adapted to regular fire events, higher temperatures may also result in an increase in the frequency and intensity of fires, which could harm the ability of native plant species to re-germinate between events (CNRA 2009).

Overall, climate change could result in very harmful effects on biodiversity. Shifts in species ranges could increase the likelihood of habitat fragmentation, and changes in precipitation could lead to increased periods of drought, making ecosystems vulnerable to colonization by invasive species.

Agriculture and Forestry

The State of California has some of the most productive agricultural regions found in the world. Shifts in climate may impact the ability of certain crops (e.g., grapes, other fruits, and nuts) to produce substantial high-quality yields. Sea-level rise, changes in growing season length, variation in precipitation, and changes in water supply could affect agricultural productivity, which could have an impact on food supplies.

The range of forest lands in the state will also likely shift in response to climate change. Temperature rise has the potential to make current forest ranges inhospitable, expand insect populations that impact tree mortality, and allow for the colonization of invasive non-native species.

Human Health and Social Impacts

Climate change could also result in increased public health risks, including an increase in mortality and morbidity due to heat-related illness and a rise in respiratory illness due to poor air quality caused by higher temperatures. Plant species habitat that shifts due to climate change may also lead to variations in the timing and duration of allergies and the colonization of new habitat by disease vectors such as non- native animals and insects. The elderly, chronically and mentally ill, infants, and the economically disadvantaged will be the most at risk of the negative effects of climate-related illness.

Greenhouse Gas Inventories

The latest GHG inventory from the U.S. Environmental Protection Agency (EPA) indicates that the U.S. emitted 6,702 million metric tons of CO_2e ($MMTCO_2e$) in 2011 (EPA 2013). The state of California makes up a substantial contribution of those GHG emissions: California produced 451.6 $MMTCO_2e$, according to the most recent inventory (CARB 2013a). The state represents the second largest contributor in the U.S. and the 15th largest emitter of GHGs in the world (CEC 2006; EPA 2012).

4.7.1.1 Local Setting

The proposed project components would be located within four major jurisdictions in the State of California: unincorporated Santa Barbara County, the City of Carpinteria, federal lands administered by the U.S. Forest Service (USFS), and unincorporated Ventura County. Given the regional nature of climate change impacts, this section describes reported GHG emissions data applicable to the proposed project area.

State of California

CARB publishes and maintains a GHG inventory that compiles statewide anthropogenic GHG emissions and sinks. CARB has also produced a business-as-usual emissions forecast for the year 2020. The inventory and forecasts include estimates for seven gases: CO_2, CH_4, N_2O, SF_6, NF_3, HFCs, and PFCs.

Table 4.7-2 summarizes CARB's GHG Inventory for the period 2000 to 2010, presented by the categories defined in the state Scoping Plan. As shown in this table, major contributors to GHG emissions statewide include transportation, industrial sources, and electric power (includes in-state generation and imports). Over the last decade, California's gross GHG emissions decreased 2.9 percent from 465.2 $MMTCO_2e$ in 2000 to 451.6 $MMTCO_2e$ in 2010, with a maximum of 492.6 $MMTCO_2e$ in 2004 (CARB 2013a). Statewide GHG emissions decreased slightly in 2010, following a marked drop in 2009 associated with the economic recession that included a decrease in on-road transportation, electricity generation, and industrial emissions.

Santa Barbara County

The Santa Barbara County Air Pollution Control District (SBCAPCD) and the Santa Barbara County Association of Government (SBCAG) developed a GHG emissions inventory for countywide sources and for the unincorporated portions of the County.

Tables 4.7-3 and 4.7-4 show total GHG emissions from sources located countywide and within unincorporated areas, respectively. Overall, GHG emissions reported for the entirety of Santa Barbara County in 2007 represent about 1.1 percent of the state totals, and about 28 percent of these countywide emissions are mostly from indirect sources associated with the electric power sector (County of Santa Barbara Planning and Development 2011).

Table 4.7-2 California Greenhouse Gas Inventory for 2000–2010

Sector	GHG emissions per year ($MMTCO_2e$)										
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Transportation	171.87	175.01	181.51	179.47	186.46	186.34	186.95	187.38	178.18	173.34	173.18
Electric Power	105.76	122.91	109.70	113.65	116.25	108.89	105.55	114.97	121.16	103.58	93.30
Commercial and Residential	42.27	41.13	43.10	41.47	42.83	41.18	41.85	42.07	42.39	42.61	43.89
Industrial	98.43	96.43	97.12	95.29	96.97	96.04	94.29	91.88	94.32	83.60	85.96
Recycling and Waste	6.25	6.34	6.29	6.39	6.34	6.65	6.75	6.71	6.90	6.94	6.98
High GWP	10.72	11.27	11.87	12.57	13.32	13.90	14.26	14.27	14.44	14.76	15.66
Agriculture	29.75	29.93	33.07	31.48	33.24	33.48	34.59	33.44	34.34	32.81	32.45
Forestry (Wildfires)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Total Gross Emissions	**465.25**	**483.12**	**482.87**	**480.51**	**492.60**	**486.68**	**484.43**	**490.89**	**491.92**	**457.83**	**451.60**
Forested Lands Net CO_2	-4.48	-4.29	-4.16	-4.17	-4.17	-4.03	-3.88	-3.95	-3.85	-3.81	(*)
Total Net Emissions	**460.77**	**487.83**	**478.71**	**476.35**	**488.43**	**482.65**	**480.55**	**486.94**	**488.06**	**454.01**	**(*)**

Source: CARB 2013b
(*) Data not reported by CARB.
Key:
CO_2 carbon dioxide
GHG greenhouse gas
GWP global warming potential

Table 4.7-3 2007 Santa Barbara Countywide Greenhouse Inventory

Sector	GHG Emissions[1] ($MMTCO_2e$)
Residential	0.75
Agriculture and Forestry	0.34
Industrial	1.04
Commercial	1.10
Transportation (Air/Marine/Rail)	0.13
On-road mobile sources	1.93
Total	**5.29**

Source: County of Santa Barbara Planning and Development 2011
Notes:
[1] Reported numbers in metric tons have been converted to million metric tons and rounded up to two decimals.

Table 4.7-4 2007 Unincorporated Santa Barbara County GHG Inventory

Sector	GHG Emissions[1] ($MMTCO_2e$)
Residential	0.22
Agriculture and Forestry	0.34
Industrial	0.51
Commercial	0.19
Transportation (Air/Marine/Rail)	0.03
On-road mobile sources	0.50
Total	**1.79**

Source: County of Santa Barbara Planning and Development 2011
Notes:
[1] Reported numbers in metric tons have been converted to million metric tons and rounded up to two decimals.

As shown in Tables 4.7-3 and 4.7-4, the distribution of emissions by sector in Santa Barbara County diverges from the statewide profile presented in Table 4.2-3, as a result of the particular land use and demographics of the area. For example, the proportion of agricultural emissions in the unincorporated County is approximately 14 percent of the total emissions, which is greater than the state inventory of 6 percent for agriculture and forestry. This result is expected, given that Santa Barbara County is a farming intensive region with approximately 80 percent of the unincorporated county zoned for agricultural uses. Furthermore, the predominance of agricultural, industrial, and transportation sources results in a higher proportion of CO_2, methane, and N_2O compared to the state reported emissions (County of Santa Barbara Planning and Development 2011).

Ventura County

Ventura County is part of the Southern California Association of Government (SCAG) area. As shown in Table 4.7-5 below, activities in the SCAG region accounted for approximately 231 $MMTCO_2e$ in 2008, about 48 percent of the statewide emissions for the same period. The principal

sources of the SCAG's GHG emissions are transportation, electricity consumption, and fuel use for residential, commercial, and industrial purposes (SCAG 2012).

Table 4.7-5 Southern California Association of Governments Historical and Baseline Greenhouse Gas Emissions

Sector	GHG emissions per year (million metric tons of CO_2 equivalent, $MMTCO_2e$)				
	1990	2000	2005	2008	2010
Electricity Consumption	56.3	63.3	59.3	58.0	55.0
Residential, Commercial, Industrial Fuel Use	39.8	41.4	41.0	37.5	36.8
Transportation	75.5	85.7	93.5	92.4	91.8
Fossil Fuel Industry	17.1	19.5	19.3	20.0	20.3
Industrial Processes	3.8	8.6	10.6	11.0	11.4
Waste Management	4.8	4.5	5.0	5.1	5.3
Agriculture	3.7	3.3	3.2	3.1	3.1
Forestry and Land Use	4.5	3.6	15.5	3.6	1.4
Total Gross Emissions	**205.5**	**229.8**	**247.3**	**230.7**	**225.1**
Emission Sinks	-0.4	-0.5	-0.5	-0.7	-0.5
Total Net Emissions	**205.0**	**229.3**	**246.8**	**230.2**	**224.6**

Source: SCAG 2012
Key:
CO_2 carbon dioxide
GHG greenhouse gas
$MMTCO_2e$ million metric tons of carbon dioxide equivalent

U.S. Forest Service Region 5 (Pacific Southwest)

Segment 4 of the proposed project's 66-kilovolt (kV) subtransmission line would traverse about 5.1 miles within the Los Padres National jurisdiction, which is located in lands administered by the USFS Region 5 (Pacific Southwest). In compliance with Executive Order 13514 "Federal Leadership in Environmental, Energy, and Economic Performance," the USFS is participating in the EPA Climate Leaders program. As part of this effort, Region 5 joined the California Climate Action Registry as a reporting member in 2007.

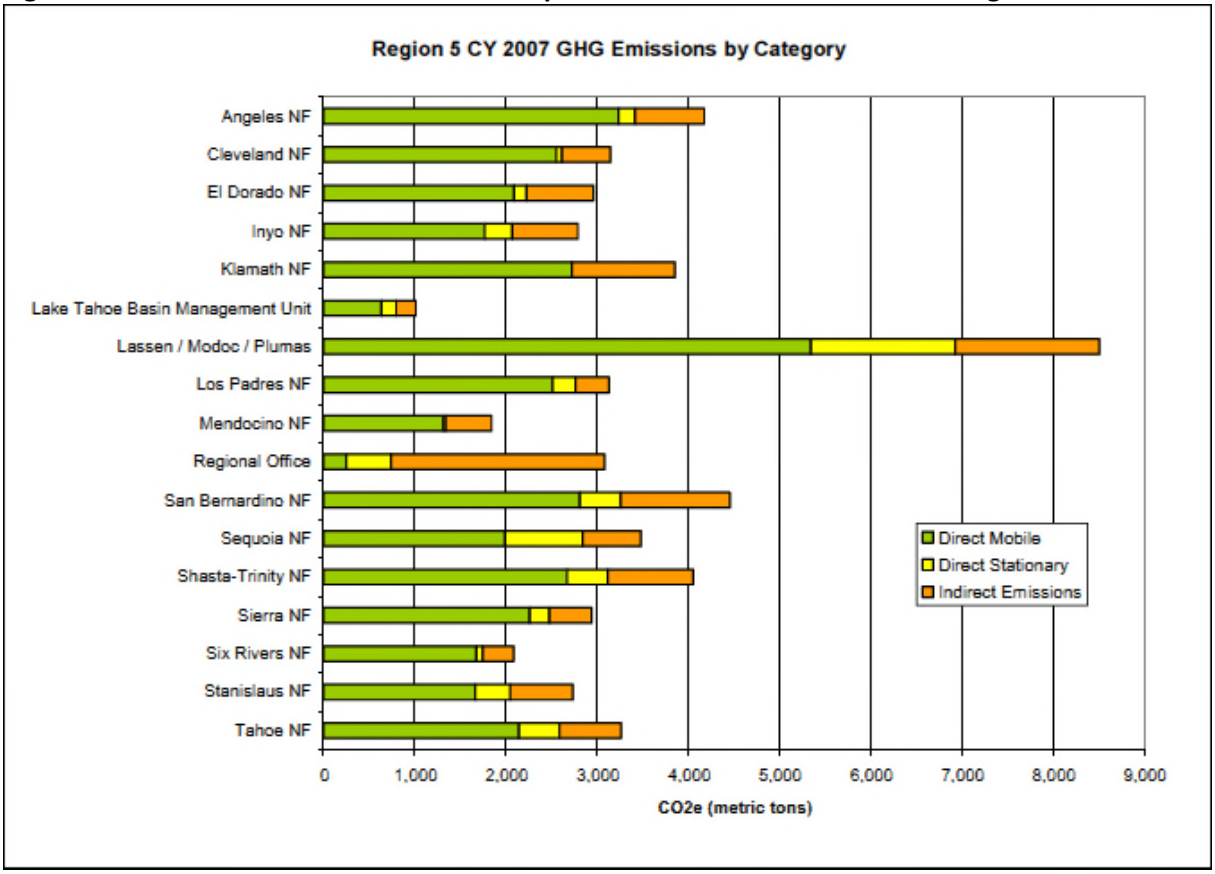
Figure 4.7-1 shows GHG emissions from the Region 5 operations in 2007, including:

(1) Direct emissions: mobile and stationary combustion sources, process emissions from manufacturing, and fugitive sources, including leaks of HFCs from air conditioning systems;

(2) Indirect emissions from energy used in its facilities: purchased electricity, steam, and district heating or cooling); and

(3) Optional reporting: additional items for voluntary reporting, such as employee commuting, business travel, and off-site waste removal.

Figure 4.7-1 Greenhouse Gas emissions reported for the U.S. Forest Service Region 5



Source: USFS 2008.

The bulk of GHG emissions for Region 5 are a result of direct mobile emissions (65 percent), while stationary emissions, mostly from propane use, make up the smallest fraction of emissions in the same region (11 percent). GHG emissions from the Los Padres National Forest represent a fraction of the overall Region 5 emissions, with a total of 3,132 metric tons CO_2e reported for calendar year 2007 (USFS 2008).

4.7.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern climate change and GHGs in the proposed project area.

4.7.2.1 Federal

The EPA is responsible for implementing federal policy to address global climate change. The federal government administers public/private partnership programs to reduce GHG emissions generated in the U.S.; these programs focus on energy efficiency, renewable energy, CH_4 and other non-CO_2 gases, agricultural practices, and implementation of technologies to reduce GHGs.

The EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufactures of heavy-duty and off-road vehicles and vehicle engines, and requires annual reporting of emissions. In 2010, the EPA issued a Final Rule that set a threshold of 75,000 metric tons of CO_2e per year for GHG emissions.

In May 2010, the EPA issued the GHG Tailoring Rule, which establishes an approach to permitting GHG emissions that focuses initially on the largest industrial sources. As of May 2012, new facilities with GHG emissions of at least 100,000 tons per year CO_2e, and existing facilities with the same emissions levels and those making changes that would increase GHG emissions by at least 75,000 tons per year CO_2e, are required to obtain Prevention of Significant Deterioration (PSD) permits. Facilities that must obtain a PSD permit to cover other regulated pollutants must also address GHG emissions increases of 75,000 tons per year CO_2e or more. New and existing sources with GHG emissions above 100,000 tons per year CO_2e must also obtain operating permits.

4.7.2.2 State

California Global Solutions Warming Act of 2006 (Assembly Bill 32)

AB 32, enacted in 2006, required CARB to:

- Adopt statewide limits on GHG emissions by January 1, 2008, that would reduce GHG emissions to 1990 levels by 2020;
- Identify the 1990 statewide level of GHG emissions to serve as the emissions limit to be achieved by 2020 (Health and Safety Code [HSC] §38550);
- Develop a scoping plan to identify the best method for reaching the 2020 limit (HSC §38561);
- Adopt a regulation requiring the mandatory reporting of GHG emissions (HSC §38530);
- Adopt regulations governing discrete early actions that could be enforceable on or before January 1, 2010 (HSC §38560.5);
- Ensure that early, voluntary reductions receive appropriate credit in the implementation of AB 32 (HSC §38562(b)(3));
- Convene an Environmental Justice Advisory Committee to advise CARB in developing the Scoping Plan and any other pertinent matter in implementing AB 32 (HSC §38591); and
- Appoint an Economic and Technology Advancement Advisory Committee to provide recommendations for technologies, research, and GHG emission reduction measures (HSC §38591).

To meet the requirements of AB 32, in December 2007, CARB approved a 2020 emission limit of 427 $MMTCO_2e$ GHGs and adopted a regulation requiring the largest industrial sources in the state to report and verify their GHG emissions. CARB also identified nine discrete early action measures that would regulate GHG emissions from landfills, motor vehicle fuels, refrigerants in cars, tire pressure, port operations, and other sources, including ship electrification at ports and reduction of high GWP gases in consumer products (CARB 2011).

In October 2008, CARB released the Climate Change Proposed Scoping Plan (AB 32 Scoping Plan) evaluating GHG impacts and proposing strategies the state would use to reduce GHG emissions as required by AB 32. The AB 32 Scoping Plan, approved by CARB in December 2008, includes the main strategies the state will use to reduce GHGs. Actions to reduce the emission of GHGs that are included in the AB 32 Scoping Plan include direct regulation of GHG emissions, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms such as a cap-and-trade system, and a program implementation regulation to fund the program (CARB 2011).

Executive Order S-3-05

Executive Order S-03-05, issued on June 1, 2005, mandates a reduction of GHG emissions to year 2000 levels by 2010, to 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. The second goal of Executive Order S-03-05 was included as a part of AB 32; however, the third goal, an emissions reduction target for 2050, remains in effect subject to repeal of the Executive Order.

Senate Bills 1078 and 107

California's Renewables Portfolio Standard (RPS) was established under Senate Bill (SB) 1078 in 2002. The RPS requires all retail electric service suppliers to increase procurement of power from eligible renewable energy resources by at least 1 percent of retail sales annually, until reaching a total of 20 percent by 2010. In 2006, SB 1078 was passed to help accelerate the implementation of the RPS by introducing tradable renewable energy credits as an incentive towards accomplishing the objectives of SB 1078.

Executive Order S-14-08 and Executive Order S-21-09

Executive Order S-14-08, issued in November 2008, mandates that retail suppliers of electric services increase procurement from eligible renewable energy resources to 33 percent by 2020. This was followed by issuance of Executive Order S-21-09, which charges CARB with establishing a regulation consistent with this 33 percent target by 2020.

Senate Bill 97

SB 97 was enacted in 2007 to include GHG emissions as a California Environmental Quality Act (CEQA) environmental category. This bill directs the Governor's Office of Planning and Research to develop draft CEQA guidelines "for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions" by July 1, 2009, and directs the CNRA to certify and adopt the CEQA guidelines by January 1, 2010.

On December 30, 2009, the CNRA adopted amendments to the CEQA Guidelines in the California Code of Regulations (CCR). The amendments went into effect on March 18, 2010.

Senate Bill 1368

SB 1368, enacted in 2006, prohibits local publicly owned electric utilities, electrical corporations, electric service providers, and community electrical aggregators from entering into long-term financial commitments in baseload generation by power plants unless they comply with a GHG emissions performance standard (EPS) jointly established by the CEC and the California Public Utilities Commission (CPUC). The EPS established a standard for baseload generation owned by, or under long-term contract to, publicly owned utilities of 1,100 pounds CO_2 (0.500 metric tons) per megawatt-hour.

4.7.2.3 Regional and Local

Santa Barbara County

Pursuant to AB 32, SB 97, and SB 375, the Santa Barbara County Board of Supervisors adopted Resolution 09-059 "to take immediate, cost effective and coordinated steps to reduce the County's collective GHG emissions" in order to protect the community from the effects of climate change and implement programs to comply with the state GHG emission reduction goals (County of Santa Barbara Planning and Development 2011).

To implement Resolution 09-059, the County is currently developing a Climate Action Strategy (CAS) to address GHG emissions. The CAS lays out GHG Emission Reduction Measures that have been identified through multiple methods in all emission sectors. A first stage of the CAS includes a Climate Action Study. This study includes a GHG inventory and forecast for the unincorporated portion of the county, a discussion of GHG emission reduction target options that the County could pursue, a list of current County activities that reduce GHG emissions, evaluation of potential additional Emission Reduction Measures the County could implement, and recommendations for implementation of the Study through a Climate Action Plan (County of Santa Barbara 2013).

In addition to the CAS, the Santa Barbara County 2010 Clean Air Plan developed by the SBCAPCD includes a climate protection chapter, with an inventory of CO_2 emissions in the county; however, this chapter is informational and not regulatory (SBCAPCD 2013).

Ventura County

In 2006, the Ventura County Board of Supervisors directed the preparation of a Climate Change Action Plan, which followed with the creation of a County Climate Change Action Team. In 2011, the Board of Supervisors approved the establishment of 2005 as the Countywide GHG emission inventory baseline and a target emissions reduction goal of 15 percent below this baseline by year 2020. To attain this goal, the draft Climate Action Plan presents 15 commitments intended to be used as guidelines for future County operations and decisions. As of the date of publication of this EIR, Ventura County has not formally adopted a Climate Change Action Plan, including goals and policies for unincorporated areas (County of Ventura 2011).

On December 2011, the Ventura County Air Pollution Control District (VCAPCD) adopted amendments to Rules No. 2, 23, 33, 33.1, 35, and 76 to implement the EPA GHG tailoring requirements for permitting stationary sources and modification projects under the PSD and title V programs of the Clean Air Act. The proposed project would not involve stationary sources, as defined by federal, state, and local Air Pollution Control District (APCD) regulations.

4.7.3 Impact Analysis

4.7.3.1 Methodology and Significance Criteria

Methodology

The applicant used the California Emission Estimator Model (CalEEMod) for the estimation of GHG emissions from the proposed project activities, using the following input data: equipment lists, vehicle fleet and miles traveled, estimated land disturbance, and proposed project schedule. CalEEMod calculates criteria pollutant and GHG emissions from a variety of land uses and has been adopted for air pollution control and air quality management districts in California since July 1,

2012. The model quantifies direct emissions from construction and operation (including vehicle use), as well as indirect emissions, such as energy use, solid waste disposal, vegetation planting and/or removal, and water use. Further, the model identifies mitigation measures to reduce criteria pollutant and GHG emissions, along with calculating the benefits achieved from measures chosen by the user. The GHG mitigation measures were recently developed and adopted by the California Air Pollution Control Officers Association.

The results reported in the CalEEMod output files were compared with the applicable significance criteria for assessing GHG impacts recommended by the SBCAPCD and VCAPCD. The districts have not officially adopted GHG thresholds of significance for land projects within their jurisdictions; however, both agencies have published recommendations for assessing impacts on GHG emissions and climate change. These recommendations are summarized below.

Significance Criteria

Pursuant to CEQA Guidelines (Section §15064.4), the lead agency for the proposed project has the discretion to determine, in the context of the project, a model or methodology to quantify GHG emissions, as well as to establish significance thresholds for evaluating potential impacts associated with them. The significance criteria were defined based on the checklist items in Appendix G of the CEQA Guidelines. An impact is considered significant if the project would:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Santa Barbara County Recommended Thresholds of Significance

Santa Barbara County is currently developing a Climate Action Strategy and Climate Action Plan based on the GHG emissions inventory data available. Until County-specific significance thresholds applicable to GHG emissions are developed and formally adopted, the County has proposed to refer to the Bay Area Air Quality Management District (BAAQMD) standards for determinations of impact significance with respect to GHG emissions as an interim measure. Given the similarities in population growth, land use patterns, General Plan policies, and behaviors in Santa Barbara County and several Bay Area counties, future land use development has been considered as similar for the local agencies (County of Santa Barbara, n.d.). In 2010, the BAAQMD adopted two methods and thresholds applicable for operation of non-stationary sources:

1. Gap Analysis Approach Significance Threshold: 1,100 MT of CO_2e/year for other than stationary sources.
2. Efficiency-based Approach Significance Threshold: 4.6 MT of CO_2e/year per Service Population for other than stationary sources (applicable statewide).[1]

[1] The efficiency-based threshold is not based on region-specific data and is mostly applicable to transportation and infill projects. It was determined by dividing the emissions inventory goal for 2020 (for land use–related sectors only) by the estimated 2020 population and employment. The number given by this calculation provides what would be considered a GHG-efficient project if its emissions were to remain below that level (County of Santa Barbara n.d.).

However, these 2010 adopted thresholds of significance were challenged in a lawsuit.[2] As a result of this legal process, the court issued a writ of mandate ordering the BAAQMD to set aside the thresholds and cease dissemination of them until the APCD had complied with CEQA (BAAQMD 2012).

Ventura County Recommended Thresholds of Significance

On September 2011, the Ventura County Air Pollution Board requested the VCAPCD staff to report on possible GHG significance thresholds for evaluating GHG impacts of land use projects within the County's jurisdiction pursuant to CEQA. Given that Ventura County is adjacent to the South Coast Air Quality Management District (SCAQMD) jurisdiction and is a part of the SCAG region, the VCAPCD recommends the use of local GHG emission thresholds of significance for land use development projects at levels consistent with those set by the SCAQMD (VCAPCD 2011). The SCAQMD has put its GHG threshold adoption efforts on hold over the past years; however, for the purpose of impact analysis, lead agencies have referred to the SCAQMD's interim GHG significance thresholds adopted in 2008 for projects where the District is the lead agency (SCAQMD 2008). The applicable SCAQMD recommended GHG emission threshold is the following:

- GHG emissions from industrial project < 10,000 $MTCO_2e$/year, including construction emissions amortized over 30 years and added to operational GHG emissions

Lead Agency Greenhouse Gas Threshold of Significance

Considering that the proposed project components would be constructed within both Santa Barbara County and Ventura County limits, and in the absence of officially adopted thresholds of significance for GHG emissions at these jurisdictions, the CPUC (Lead Agency) has determined to use the SCAQMD Interim GHG Significance Threshold of 10,000 MT CO_2e/year for the purpose of this environmental impact report (EIR) analysis. This selection is based on the fact that the most stringent threshold of significance (1,100 MT CO_2e/year for operational emissions, recommended by Santa Barbara County) has been legally challenged and removed from District guidelines by the time of publication of this EIR.

4.7.3.2 Applicant Proposed Measures

The applicant has not identified any potential significant impacts on GHG emissions as part of the Proponent Environmental Assessment; therefore, no GHG-specific applicant proposed measures (APMs) have been considered as part of the design of the proposed project. However, reductions in combustion emissions from fossil-fueled equipment associated with implementation of APM AQ-2 are anticipated to have an indirect effect on reducing GHG emissions from heavy duty construction equipment and vehicles. Refer to Chapter 2, Table 2-10 for a summary of the proposed project APMs.

[2] On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the APCD had failed to comply with CEQA when it adopted the thresholds. The court did not determine whether the thresholds are or are not based on substantial evidence and thus valid on the merits (BAAQMD 2012).

4.7.3.3 Environmental Impacts

Overview of Project-Specific Greenhouse Gas Emissions

The proposed project would primarily cover 66-kV subtransmission line construction/ reconductoring and installation of telecommunication systems at three substations. The majority of the construction GHG emissions would be associated with use of combustion off-road equipment and vehicles. In addition, temporary construction activities would disturb over 200 acres of land and remove 530 trees. Tables 4.7-6 and 4.7-7 provide a summary of construction and operational emissions estimated by the applicant for the proposed project using CalEEMod. Operations and maintenance emissions from the proposed project would be similar to those from the existing 66-kV system and substations operated by the applicant in the same geographical area. The applicant estimates that a maximum of 15 vehicle trips per month would occur during operation.

Table 4.7-6 Project-specific Construction Emissions

Year	Proposed Project Component	Annual GHG Emissions (MT CO_2e/year)[1]
2015	66-kV Subtransmission Line	3,581
	Substations	241
	Total 2015	**3,822**
2016	66-kV Subtransmission Line	564
	Substations	19
	Total 2016	**583**

Source: SCE 2012
Notes:
[1] GHG emissions estimated by the applicant after implementation of proposed air quality applicant proposed measures. 66-kVsubtransmission line emissions in 2014 include retaining wall construction (30 units) and installation of four J-Towers in Segment 4 instead of TSPs.
Key:
GHG Greenhouse gas
MT Metric tons

Table 4.7-7 Project-specific Operations and Maintenance Emissions

Proposed Project Component	Annual GHG Emissions (MT CO_2e/year)
66-kV Subtransmission Line and Substation O & M[1]	10
Amortized 30-year construction emissions[2]	147
Total Operational Emissions	**157**
CPUC-Applied SCAQMD Threshold[3]	10,000
Exceeds Threshold of Significance?	**No**

Source: SCE 2012
Notes:
[1] GHG emissions estimated by the applicant using CalEEMod and assuming a maximum of 15 vehicles per year for routine maintenance.
[2] Amortized GHG emissions were estimated by adding construction emissions presented in Table 4.7-6 for the years 2014 and 2015 and dividing the total by 30 years.
[3] Applicable Threshold of Significance selected by Lead Agency based on recommended criteria from VCAPCD.

Table 4.7-7 Project-specific Operations and Maintenance Emissions

Proposed Project Component	Annual GHG Emissions (MT CO_2e/year)

Key:

CO_2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
GHG	greenhouse gas
MT	metric tons
SCAQMD	South Coast Air Quality Management District
O & M	Operation and Maintenance
VCAPCD	Ventura County Air Pollution Control District

Operation and maintenance would not involve the use of new permanent sources of GHG emissions, such as gas-insulated equipment, generators, compressors, or other combustion stationary sources.

Impact GHG-1: Direct and Indirect GHG Emission Levels
LESS THAN SIGNIFICANT

Direct contributions of the proposed project to local and regional GHG emissions would primarily occur during the proposed 66-kV subtransmission line construction and reconductoring activities planned for year 2015 and associated with the temporary use of mobile sources and heavy duty diesel-fired equipment. As shown in Tables 4.7-6 and 4.7-7, direct GHG emissions from the proposed project-related activities would be well below the applicable thresholds of significance considered by local jurisdictions and would represent a small fraction of the local GHG emission inventories and targets for reduction.

Indirect emissions from the proposed project would be associated with electricity consumption at permanent project facilities. Since the Santa Clara, Casitas, and Carpinteria Substations are existing facilities currently operated by the applicant, and no additional permanent GHG-emitting equipment would be installed as part of the proposed project, indirect emissions from the project are considered not applicable.

Construction and operation and maintenance of the proposed project are relatively insignificant when compared to the viable standards. The proposed project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; therefore, the impact is less than significant under this criterion.

Impact GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.
LESS THAN SIGNIFICANT

As described in Section 4.7.2.3, all applicable jurisdictions for the proposed project have not officially adopted Climate Action Plans, policies, or regulations for the purpose of reducing GHG emissions from non-stationary sources. At the state level, a scoping plan, approved by CARB on December 12, 2008, provides the outline for actions to reduce California's GHG emissions. The scoping plan now requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHG emissions. The proposed project construction and operation would not conflict with any of the policies or GHG emission reduction measures outlined in the scoping plan. Although the operation of gas-insulated equipment is not being considered as part of the proposed project, the applicant is required to comply with state

regulations for reducing SF_6 emissions from gas-insulated switchgear (17 CCR Sections 95350 to 95359) at all facilities.

Construction, operation, and maintenance of each component of the proposed project would comply with all applicable regulations for the reduction of GHG. Construction, operation, and maintenance of the proposed project would not conflict with a federal, state, regional, or local plan, policy, or regulation for reducing GHG emissions; therefore, impacts under this criterion would be less than significant.

4.7.4 Mitigation Measures

There are no mitigation measures applicable to GHG.

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4.8 Hazards and Hazardous Materials

This section describes the environmental and regulatory settings, and discusses potential impacts associated with, the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to hazards and hazardous materials. The work associated with the Getty, Goleta, Ortega, Ventura, and Santa Barbara Substations would occur within existing structures and would not involve the use of or exposure to hazardous materials; therefore, these components of the proposed project are not discussed further in this section. Impacts from geologic hazards are discussed in Section 4.6, "Geology, Soils, and Minerals"; transportation hazards are further discussed in Section 4.15, "Transportation and Traffic"; and impacts on government facilities, including those for fire and police protection, are further discussed in Section 4.13, "Public Services and Utilities."

4.8.1 Environmental Setting

4.8.1.1 Hazardous Materials Sites

A "hazardous material" is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment (California Health and Safety Code, Chapter 6.95, Section 25501(o)). Per Title 22 of the California Code of Regulations (CCR), Division 4.5, Chapter 11, materials and waste may be considered hazardous if they exhibit one or more of the following characteristics: ignitability (can be ignited by open flame); corrosivity (corrode other materials); reactivity (react violently, explode, or generate vapors when mixed with water); or toxicity (are poisonous). Hazardous materials have the potential to leach into soils, surface water, and groundwater when spilled or released, causing soil, water, or groundwater contamination. Soils possessing contamination levels in excess of governmental thresholds for certain substances must be treated as hazardous waste during their excavation, transport, and disposal. For this reason, the handling, transport, and disposal of hazardous materials is heavily regulated by policies from agencies at the federal, state, and local levels in order to protect humans and the environment from exposure to hazards associated with accidental spills or illicit releases.

The proposed project area crosses urban and rural areas in unincorporated Santa Barbara and Ventura Counties, as well as the cities of Carpinteria, Santa Barbara, and Ventura. A small portion of the proposed project area is located in U.S. Forest Service (USFS)-managed land in the Los Padres National Forest.

Cortese List Sites

State of California Government Code Section 65962.5 (often referred to as the "Cortese List") is composed of the State Water Resource Control Board's (SWRCB's) Geotracker database, solid waste disposal sites list, Cease and Desist Orders and Cleanup and Abatement Orders list. The California Department of Toxic Substance Control's (DTSC's) EnviroStor database and hazardous waste sites composes the provisions of Government Code Section 65962.5 (often referred to as the "Cortese List"). A review of the Cortese List sources did not identify any SWRCB Geotracker sites, solid waste disposal sites, Cease and Desist Orders and Cleanup and Abatement Orders sites, DTSC Envirostor, or hazardous waste sites within 1,000 feet of the proposed project (SWRCB 2014, 2013a,b; DTSC 2012, 2013).

4.8.1.2 Schools

Four schools are located within 0.25 miles of the proposed project components, as shown in Table 4.8-1.

Table 4.8-1 Schools within 0.25 Miles of Components of the Proposed Project

School	Address	Approximate Distance/Direction from Nearest Project Component
Carpinteria High School	4810 Foothill Road, Carpinteria, CA 93013	Adjacent to Carpinteria Substation and Segment 4
Rincon High School	4698 Foothill Road, Carpinteria, CA 93013	0.25 miles west of Segment 4
Canalino Elementary School	1480 Linden Ave., Carpinteria, CA 93013	0.22 miles south of Segment 3a
Howard Carden School (Private)	5315 Foothill Road Carpinteria, CA 93013	0.03 miles south of Segment 3a

4.8.1.3 Airports and Airstrips

No project components are located within 2 miles of a public or private airport or airstrip**.** The nearest heliport is the Southern California Edison (SCE) Ventura Service Center heliport, located approximately 1.25 miles from the Santa Clara Substation.

4.8.1.4 Emergency Response Plans

Ventura County, Santa Barbara County, and the City of Carpinteria have developed and implemented several emergency response plans to help the communities prepare for and organize the responses to natural and human-caused disasters. Emergency response and evacuation plans that apply to the proposed project area include the Santa Barbara County Hazardous Materials Emergency Response Area Plan, Santa Barbara County General Plan Seismic Safety and Safety Element, Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan, Ventura County Multi Hazard Functional Plan, Ventura County General Plan Hazards Appendix, and City of Carpinteria General Plan Safety Element. Daily administration of the disaster preparedness and response programs for these areas is handled by the Santa Barbara County Fire Department, Ventura County Sheriff's Office of Emergency Services, and City of Carpinteria Police Department in the respective jurisdictions.

The City of Carpinteria identified Highway 101 and Union Pacific Railroad as primary and secondary evacuation routes. The remaining emergency response plans applicable for the project area have not identified emergency response routes.

4.8.1.5 Fire Hazards

Santa Barbara and Ventura Counties experience annual cycles of elevated wildland fire danger. Wildland fires resulting from either natural (e.g., lightning) or anthropogenic (e.g., cigarettes dropped in dry brush) causes can ignite and spread quickly, destroying the natural landscape and threatening the lives and personal property of residents located in wildfire-prone areas.

Fire Hazard Severity Zones

The California Department of Forestry and Fire Protection (CALFIRE) is the state agency responsible for fire protection in State Responsibility Areas (SRAs) of California and also identifies and maps fire risks in SRA's, Federal Responsibility Areas (FRAs), and Local Responsibility Areas (LRAs). CAL FIRE identifies five types of fire hazard severity (extreme, very high, high, moderate, and little or no threat) and issues recommendations for Very High Fire Hazard Severity Zones. In January 2008, CALFIRE updated these Fire Hazard Severity Zone (FHSZ) maps to reflect revised Very High FHSZ for LRAs throughout California. The counties of Santa Barbara and Ventura participated in this update to ensure the accuracy of mapped areas within each County's LRA. The fire hazard severity zones for each project component are shown on Figure 4.8-1. Proposed project components within urbanized locations, including the Santa Barbara, Ortega and Ventura Substations, are not subject to wildland fire hazard analysis by CALFIRE.

Recent Fires

In the proposed project area, elevated wildland fire risk is associated with the area's low annual precipitation rate, highly flammable native vegetation, and susceptibility to high velocity "sundowner" and "Santa Ana" winds that occur predominantly during late summer and fall. These dry and windy conditions make the area between Los Angeles and Santa Barbara highly susceptible to ignition, and in recent years several large wildland fires have occurred, requiring responses by local firefighters. Recent fires that have required a response by fire response agencies in Santa Barbara and Ventura Counties are described below.

Tea Fire

The Tea Fire burned approximately 1,940 acres in Montecito, California, near Cold Springs Creek and Hot Springs Road (approximately 8 miles west of the Carpinteria Substation) in November 2008. During the fire, 210 residences were destroyed, and the fire and smoke damaged local transmission lines, affecting their use during emergency conditions. The cause of the fire was attributed to a brush fire that spread rapidly throughout the area due to strong winds (CALFIRE 2008).

Guiberson Fire

In September 2009, the Guiberson Fire burned approximately 17,500 acres in Guiberson Canyon (approximately 18 miles east of the Santa Clara Substation). The Ventura County Fire Department led the six-day firefighting and emergency response effort, which also required cooperation from CALFIRE, USFS, Ventura County Sheriff, California Highway Patrol (CHP), California Emergency Management Agency (CalEMA), California Coastal Commission, Bureau of Land Management, City of Moorpark, Southern California Gas, SCE, and the American Red Cross (CALFIRE 2009). During the fire, one building was destroyed, 10 people were injured, and there was a total of $9.8 million in damages (CALFIRE 2009). According to reports from Ventura County Fire Department, the cause of the fire was attributed to the spontaneous combustion of a mulch pile (Wildfire Today 2010).

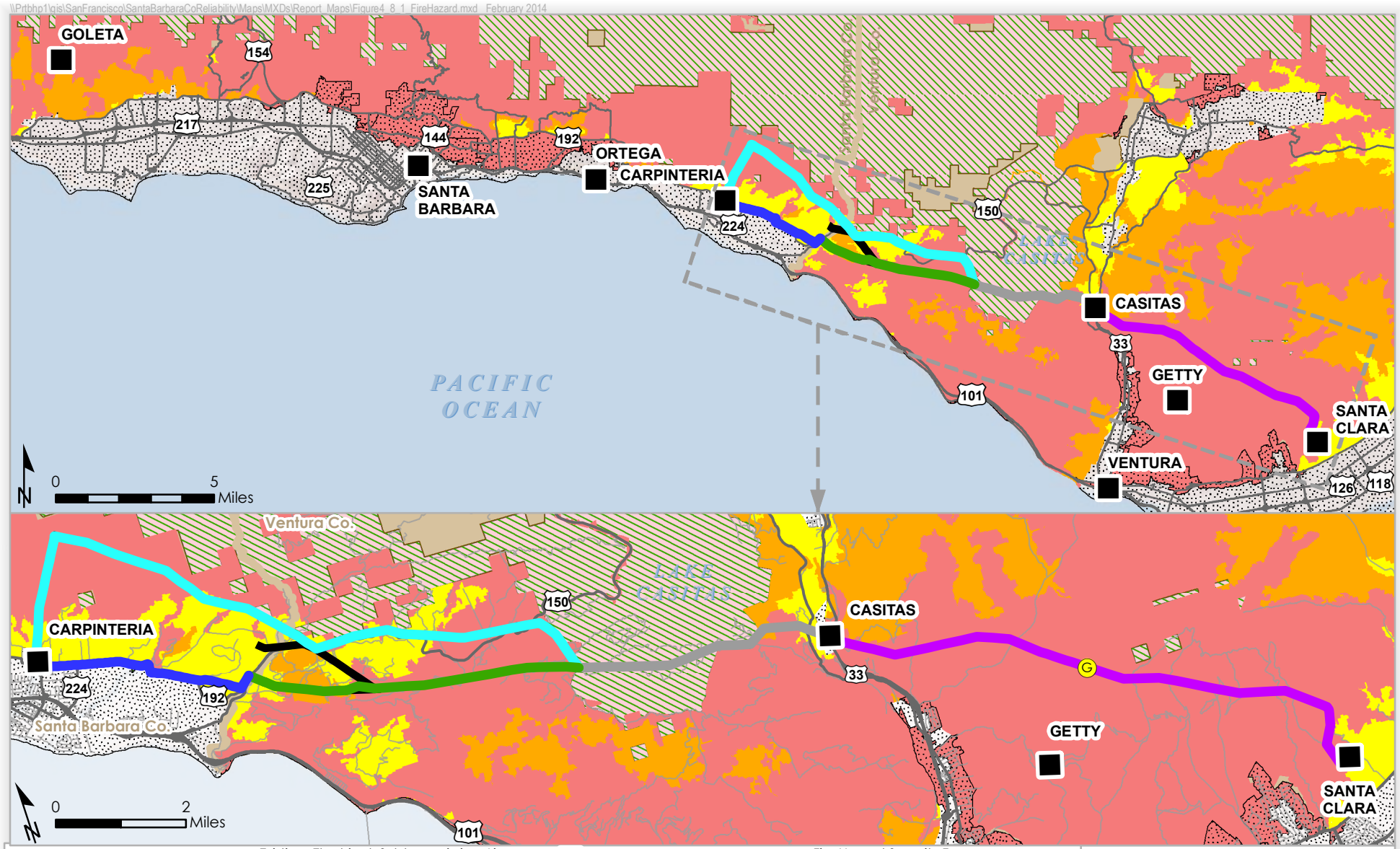

Figure 4.8-1
Fire Hazard Severity Zones in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

White Fire

In May 2013, the White Fire occurred several miles northwest of the Goleta Substation. The blaze lasted from May 27 through May 30th, and in this short time the brush fire burned a total of 1,984 acres. Fuels involved in the fire included dry chaparral, grass, brush, and oak trees. Extreme terrain made access for firefighting efforts difficult. Several cooperating agencies were involved, including the USFS, Santa Barbara County, Santa Barbara City, Carpinteria/Summerland Fire, Montecito Fire, Lompoc Fire, Santa Maria City Fire, Chumash Fire, Santa Barbara County Sheriff's Department, Santa Barbara County Search and Rescue, CHP, and the American Red Cross (USFS 2013).

4.8.2 Regulatory Setting

4.8.2.1 Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, outlines regulations for the cleanup of toxic waste sites nationwide. In 1986, Superfund was amended by the Superfund Amendment and Reauthorization Act (SARA) Title III, also known as the Emergency Planning and Community Right-to-Know Act. SARA Title III and the Clean Air Act of 1990 established a nationwide emergency planning and response program and imposed reporting requirements for businesses that store, handle, or produce significant quantities of extremely hazardous materials. These acts require states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such material is stored or handled at a facility.

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 (15 United States Code 2601, et seq.) authorizes the United States Environmental Protection Agency (EPA) to track industrial chemicals produced within or imported into the United States. Under this act, the EPA screens and tests industrial chemicals that pose a potential health hazard to humans and/or the environment. This act grants the EPA the authority to control and ban newly developed industrial chemicals and other chemicals that pose a risk in order to protect public and environmental health.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) regulates hazardous waste from the time that waste is generated through to its management, storage, transport, treatment, and final disposal. The EPA has authorized the DTSC to administer the State's RCRA programs. A RCRA hazardous waste exhibits at least one of four characteristics: ignitability, corrosivity, reactivity, or toxicity. To keep track of hazardous waste activities, treatment, storage, and disposal, facility owners and operators must keep certain records and submit reports to the EPA at regular intervals. All facilities that generate, transport, recycle, treat, store, or dispose of hazardous waste are required to notify the EPA (or its state agency) of their hazardous waste activities. An EPA Identification Number must be obtained unless the waste has been excluded from regulation or exempted. National Biennial RCRA Hazardous Waste Reports Sections 3002 and 3004 of RCRA require that the EPA collect information pertaining to hazardous waste management from hazardous waste generators and hazardous waste treatment, storage, and disposal facilities every

two years. RCRA is relevant to the proposed project because it would regulate all used transformer oil and hazardous waste resulting from project construction and operation.

Hazardous Materials Transportation Act

The primary objective of the Hazardous Materials Transportation Act (HMTA) of 1975 is to provide adequate protection against risks to life and property inherent in the transportation of hazardous materials in commerce. The HMTA empowers the U.S. Department of Transportation (DOT) to regulate the transportation of hazardous materials by rail, aircraft, vessel, and public highway. Amendments in 1976 and 1990 substantially revised existing provisions and added new requirements for chemicals that the DOT has determined pose unreasonable risks to health, safety, and property during transport activities. Hazardous materials regulations are subdivided by function into four areas:

- Procedures and/or Policies – 49 Code of Federal Regulations [CFR] Parts 101, 106, and 107;
- Material Designations – 49 CFR Part 172;
- Packaging Requirements – 49 CFR Parts 173, 178, 179, and 180; and
- Operational Rules – 49 CFR Parts 171, 173, 174, 175, 176, and 177.

National Fire Protection Association 780, National Electrical Code

To avoid electrical hazards, a thorough knowledge by electrical contractors of the National Electric Code (NEC) is required to install any electrical power system. The NEC covers the installation of electrical conductors, equipment, and raceways; signaling and communications conductors; and equipment and optical fiber cables for public and private premises.

Oil Pollution Prevention

The objective of the oil pollution prevention regulation in 40 CFR Part 112 is to prevent oil discharges from reaching navigable waters of the United States or adjoining shorelines. This regulation was also written to ensure effective response to oil discharge. It further requires that proactive measures be used to respond to oil discharge. It contains two major types of requirements: prevention requirements (the Spill Prevention, Control, and Countermeasure [SPCC] rule) and Facility Response Plan requirements.

SPCC Plans are required for facilities that are non-transportation-related, have an aggregate aboveground storage capacity greater than 1,320 gallons or a completely buried storage capacity greater than 42,000 gallons, and that have a reasonable expectation of a discharge into or upon navigable waters of the United States (refer to Section 4.9, “Hydrology and Water Quality”). SCE’s current SPCCs for the Carpinteria, Casitas, and Santa Clara Substations would be updated as required for the proposed project.

Transformer Oil Transport and Recycling

Title 49 CFR Part 130 applies to the transport of transformer oil (mineral oil) when shipped in containers of 3,500 gallons or more. According to 49 CFR Part 130, containers used for the transportation of oil subject to this part must be designed, constructed, maintained, closed, and loaded such that under conditions normally incident to transportation, there will be no release of oil to the environment. In addition, a response plan must be developed pursuant to 49 CFR Part

130 requirements. Standards for the recycling of used transformer oil are established in 40 CFR Part 279.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) administers Occupational Safety and Health Standards (29 CFR Sections 1910 and 1926) that (1) provide regulations for safety in the workplace; (2) regulate construction safety; and (3) require a Hazard Communication Plan to identify and inventory all hazardous materials and material safety data sheets. OSHA's standards also require employee training in safe handling of hazardous materials. OSHA standards are relevant to the proposed project because its construction and operation would involve the use of heavy-duty equipment, helicopters, and heavy-duty and lighter vehicles that may pose health and safety risks to workers. In addition, workers would handle and use chemical substances.

Federal Aviation Administration

Under 14 CFR Part 77.9, notification of construction or alteration to the Federal Aviation Administration (FAA) is required for any structures taller than 200 feet.

Los Padres National Forest Land Management Plan

The Los Padres National Forest Land Management Plan (Forest Plan) contains standards and guidelines to protect water, wilderness, wildlife, recreation, scenic landscapes, and heritage resources in the Los Padres National Forest (USFS 2005). The Forest Plan includes several program strategies and tactics for preventing fire, such as the removal of dead vegetation, thinning (removal of living trees from overstocked stands), fuelbreak maintenance, and installing Wildland-Urban Interface Defense and Threat Zones to ensure that defensible spaces are adequate to reduce the risk of catastrophic wildland fire (USFS 2005).

4.8.2.2 State

California Code of Regulations, Title 22, Chapter 11

CCR Title 22, Division 4.5, Chapter 11 contains regulations for the identification and classification of hazardous wastes. This code defines a waste as hazardous if it has any of the following characteristics: ignitability, corrosivity, reactivity, or toxicity. Article 3 provides detailed definitions of each characteristic. Articles 4 and 5 provide lists of RCRA hazardous wastes, non-RCRA hazardous wastes, hazardous wastes from specific sources, extremely hazardous wastes, hazardous wastes of concern, and special wastes.

California Health and Safety Code

The California Environmental Quality Act (CEQA) guidelines define "extremely hazardous substances" as those defined by Section 25532(2)(g) of the California Health and Safety Code. These include the substances listed in Appendix A of Part 355 (commencing with Section 355.10) of Subchapter J of Chapter I of Title 40 of the CFR, which provides a list of extremely hazardous substances and their threshold planning quantities.

The CEQA Guidelines define "hazardous air emissions" as emissions of air contaminants identified as toxic by the California Air Resources Board or the designated air pollution control officer. These include substances identified in Section 44321(a to f) of the California Health and Safety Code.

Section 25150.7 of the California Health and Safety Code outlines procedures and regulations for the management and disposal of treated wood waste. Wood waste, including the type of wood utility poles that would be disposed as part of the proposed project, may be treated with preservatives and other chemicals to protect the wood. Because the chemical treatments could leach into water supplies when disposed of, Section 25150.7 was developed to restrict how and where treated wood waste can be disposed.

Government Code Section 65962.5: Cortese List

The Cortese List includes all hazardous waste facilities subject to corrective action; land designated as hazardous waste property or border zone property; information received by the DTSC about hazardous waste disposals on public land; sites listed pursuant to Section 25356 of the Health and Safety Code (removal and remedial action sites); and sites included in the Abandoned Site Assessment Program. Pursuant to Government Code Section 65962.5, the DTSC compiles and updates the Cortese List as appropriate, but at least annually.

Hazardous Waste Control Act

The Hazardous Waste Control Act established the state hazardous waste management program, which is similar to, but more stringent than, RCRA program requirements. CCR, Title 26 describes the requirements for the proper management of hazardous waste under the Hazardous Waste Control Act, including the following:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

These regulations list more than 800 materials that may be hazardous and establish criteria for the identification, packaging, and disposal of such waste. Under the Hazardous Waste Control Act and Title 26, the generator of hazardous waste must document waste from generation to transporter to disposal. Copies of this documentation must be filed with the DTSC.

The DTSC operates programs to protect California from exposure to hazardous wastes through the following practices and procedures:

- Handling of the aftermath of improper hazardous waste management by overseeing site cleanup;
- Prevention of the release of hazardous waste by ensuring that those who generate, handle, transport, store, and dispose of wastes do so properly;
- Enforcement against those who fail to appropriately management hazardous wastes;
- Exploration and promotion of measures to prevent pollution and encourage reuse and recycling;

- Evaluation of site-specific soil, water, and air samples and the development of new analytical methods;
- Practice in other environmental sciences, including toxicology, risk assessment, and technology development; and
- Involvement of the public in the DTSC's decision making.

Emergency Services Act

Under the Emergency Services Act, the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous material or hazardous waste is an important segment of the plan administered by CalEMA. CalEMA coordinates the response of agencies that include the California Environmental Protection Agency, California Department of Transportation, CHP, regional water quality control boards (RWQCBs), air quality management districts, and county disaster response offices.

California Occupational Health and Safety Administration

The California Occupational Health and Safety Administration (Cal/OSHA) is responsible for the development and enforcement of workplace safety standards and ensuring worker safety in the handling and use of hazardous materials. Cal/OSHA requires businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Cal/OSHA Hazards Communication Standard requires that workers be informed of the hazards associated with the materials they handle. Manufacturers are required to label containers, provide Material Safety Data Sheets in the workplace, and provide worker training.

Under CCR, Title 8, Cal/OSHA establishes requirements for safe working conditions and safety-related reporting in California and regulates electrical safety (Electrical Safety Orders). The primary intent of the Title 8 requirement is to protect workers, but compliance with these regulations also reduces potential hazards for non-construction workers and project vicinity occupants through the implementation of required controls relating to site monitoring, reporting, and other activities.

California Public Resources Code

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify the requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas.

Specifically, Sections 4292 and 4293 of the California Public Resources Code address vegetation management in transmission line corridors. Within SRAs that include mountainous land, forest-covered land, brush-covered land, or grass-covered land, owners and managers of electrical transmission lines are required to maintain a firebreak consisting of a clearing of not less than 10 feet in each horizontal direction from the entire outer circumference of poles or towers that support electrical infrastructure that could be a source of ignitions and therefore present a fire risk, including switches, fuses, transformers, and lightning arresters. California Public Resources Code Section 4293 requires the felling, cutting, or trimming of dead, rotten, decayed, diseased, or otherwise weakened trees that may affect or fall on an electric line.

California Public Utilities Commission General Orders and Decisions

The California Public Utilities Commission (CPUC) regulates the construction and operation of overhead transmission lines in California through the implementation and oversight of several rules and regulations known as General Orders (GOs) and CPUC Decisions. GOs 95, 165, and 166 and CPUC Decision 12-01-032 would apply to the proposed project, as described below.

GO 95: Rules for Overhead Electric Line Construction

GO 95 is the main CPUC rule regulating the design, construction, operation, and maintenance of overhead electric lines in California. This order includes safety standards for overhead electric lines, including minimum conductor ground clearance, electric line inspection requirements, and vegetation clearance requirements. Rule 35, Tree Trimming, defines minimum vegetation clearances around power lines. This rule also requires that utility providers remove dead, rotten, and diseased trees that overhang or lean toward a span of an electric line. Rule 31.2, Inspection of Lines, requires that lines be inspected frequently to ensure that they are in good condition and that lines temporarily out of service be inspected and maintained to prevent a hazard.

GO 166: Standards for Operation, Reliability, and Safety During Emergencies and Disasters

GO 166 applies to all electric utilities subject to the jurisdiction of the CPUC and addresses electric service reliability and safety. The purpose of this order is to ensure that jurisdictional electric utilities are prepared for emergencies and disasters in order to minimize damage and inconvenience to the public that may occur as a result of electric system failures, major outages, or hazards posed by damage to electric distribution facilities. Investigations required by this order are conducted following every major outage, pursuant to and consistent with Public Utilities Code Section 364(c) and CPUC policy.

CPUC Order Instituting Rulemaking to Revise and Clarify Commission Regulations Relating to the Safety of Electric Utility and Communications Infrastructure Provider Facilities (R.08-11-005)

In November 2008, the CPUC issued the Order Instituting Rulemaking to Revise and Clarify Commission Regulations Relating to the Safety of Electric Lines and Communications Infrastructure Provider Facilities (Electric Safety OIR). The purpose of the Electric Safety OIR was to determine whether CPUC regulations addressing potential hazards, such as fires, that could result from electric transmission and distribution lines required revision or clarification.

The CPUC issued Decision 09-08-029 (Phase 1 – Measures to Reduce Fire Hazards in California Before the 2009 Fall Fire Season, or Phase 1 Decision) in this proceeding in August 2009. The Phase 1 Decision required the application of GO 95 to non-electric utilities (such as SoCalGas). In the next phase of this proceeding (Decision 12-01-032 – Decision Adopting Regulations to Reduce Fire Hazards Associated with Overhead Power Lines and Communication Facilities, or Phase 2 Decision), on January 12, 2012, the CPUC adopted an order instituting rulemaking to revise and clarify CPUC regulations relating to the safety of electric utility and communications infrastructure provider facilities. This decision adopted further regulations to reduce fire hazards associated with overhead power lines and aerial communication facilities located in close proximity to power lines, including revisions to GO 95, GO 165, and GO 166. GO 166 was revised to require investor-owned electric utilities in southern California, such as SCE, to prepare and submit plans to prevent power-line fires during extreme weather events. In addition, the Phase 2 Decision clarified that certain

inspection and reporting requirements under GO 165 were now applicable to facilities belonging to non-electric utilities, such as the storage field property owned and operated by SoCalGas.

The CPUC is anticipated to issue a Phase 3 Decision under the Electric Safety OIR that will establish regulations for electric distribution lines in areas of high fire risk. Phase 3 will address the establishment of:

- Standards for wood structures and materials that will allow utilities to reliably obtain prescribed safety factors enforceable by the CPUC;
- Modern materials and practices, with the goal of improving fire safety; and
- Fire safety standards for the design and construction of electrical infrastructure in areas of high fire threat.

In addition, the Phase 3 Decision will address whether and how proposed fire safety standards should apply to existing facilities in high fire threat districts, as well as the development of a plan for reporting to the Commission's Consumer Safety and Protection Division.

Underground Service Alert (DigAlert)

Government Code 4216 *et seq.* defines emergency notification procedures for subsurface excavations and installations. Pursuant to Government Code 4216, SCE would contact the Underground Service Alert of Southern California prior to construction of the proposed project (DigAlert 2013).

4.8.2.3 Regional and Local

California Standardized Emergency Management System

The California State Legislature passed Senate Bill 1841, with the intent of improving the coordination of state and local responses during disaster incidents. Under Senate Bill 1841, the Office of Emergency Services was required to establish the Standardized Emergency Management System (SEMS) in coordination with state and local agencies. The SEMS system provides a common management structure and language to aid in coordination between agencies and local governments. The SEMS system also established a master mutual aid agreement and program. Local governments are required to use SEMS in order to be eligible for state funding for emergency response services.

Certified Unified Program Agency

Administration of the Certified Unified Program Agency (CUPA) is authorized by the California Health and Safety Code (Chapter 6.11, Sections 25404-25404.8) and CCR (Title 27, Division 1, Subdivision 4, Chapter 1, Sections 15100–15620). The CUPA is implemented at the local level by government agencies certified by the secretary of the California Environmental Protection Agency. The CUPA consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of environmental and emergency response programs such as Uniform Fire Code Article 80 Hazardous Materials Business Plans (HMBPs), SPCC Plans, and Hazardous Waste Generator and Onsite Hazardous Waste Treatment Program permits. Local CUPAs for the proposed project area are described in detail in Section 4.8.2.3 of this EIR.

The CUPAs with jurisdiction in the proposed project area include the Santa Barbara County Fire Department Hazardous Materials Unit (Santa Barbara County Fire Department 2013), Ventura City Fire Department, and Ventura County Environmental Health Division (County of Ventura Environmental Health Division 2012).

Santa Barbara County Code of Ordinances

The County of Santa Barbara Code of Ordinances Section 10-3.1.2(C) amends Section 702A of the California Building Code (otherwise adopted by the County) to add a High Fire Hazard Area definition.

The Santa Barbara County FHSZ map is adopted through County Code Chapter 10 - Building Regulations and used by several County departments for hazard planning, mitigation and response, land use planning, and in the development review process (County of Santa Barbara 1979).

Santa Barbara County General Plan

A number of policies presented in the Santa Barbara County General Plan, Seismic Safety and Safety Element, are directed at identifying and reducing fire hazards, such as:

- **Fire Policy 8:** The County Office of Emergency Services shall continue coordinating emergency planning for the Santa Barbara Operational Area pursuant to the California Emergency Services Act of 1970.
- **Fire Policy 9:** The County shall minimize the potential effects of fire hazards through the development review process pursuant to State law.
- **Fire Policy 10:** The County should reference the Santa Barbara County Multi-Jurisdiction Hazard Mitigation Plan when considering measures to reduce potential harm from fire-related activity to property and lives.

Santa Barbara County Communities Wildfire Protection Plan

The Santa Barbara County Communities Wildfire Protection Plan (CWPP) fulfills the state requirements of a Unit Fire Management Plan for entities such as Santa Barbara County that act as an agent to CALFIRE. The CWPP also fulfills regulatory compliance of the 2003 Healthy Forests Restoration Act, which requires the development of community wildfire protection plans for local jurisdictions. The CWPP describes the Santa Barbara County Fire Department's planning process, administrative activities required for wildfire protection, identification of wildfire hazards, completion of a wildfire risk assessment, and identification of at-risk communities and target planning blocks (County of Santa Barbara 1979).

Ventura County General Plan

The Ventura County General Plan, Seismic Safety and Safety Element, includes goals and policies pertaining to hazards and hazardous materials; however, none of the goals and policies would apply to the proposed project.

Ventura County Ojai Valley Area Plan

The Ventura County Ojai Valley Area Plan includes goals and policies pertaining to hazards and hazardous materials; however, none of the goals and policies would apply to the proposed project (Ventura County 2008).

Ventura County Code of Ordinances

Per the Ventura County Fire Protection District Ordinance Number 27, M103, fire officials may restrict entry to public lands during wildfires. The fire code official is authorized to determine and publicly announce when Wildland Urban Interface (WUI) zone or FHSZ areas shall be closed to entry and when the areas should be reopened. Entry into and occupation of WUI or FHSZ areas is prohibited, except for public roadways, inhabited areas, or established trails and campsites that have not been closed when the WUI or FHSZ area is closed to entry.

City of Ventura General Plan

The City of Ventura General Plan includes goals and policies pertaining to hazards and hazardous materials; however, none of the goals and policies would apply to the proposed project (City of Ventura 2005).

City of Carpinteria General Plan and Local Coastal Program

The Safety Element of the City of Carpinteria General Plan and Local Coastal Program includes objectives and policies pertaining to hazards and hazardous materials which would apply to the proposed project, such as"

- **Objective S-5:** Minimize the potential risks and reduce the loss of life, property and economic and social dislocation resulting from urban and wildland fires.
- **Policy S-5a:** All new structures must adhere to the Carpinteria-Summerland Fire Protection District Ordinance and the Santa Barbara County Fire Department Ordinances, where applicable (City of Carpinteria 2003).

4.8.3 Impact Analysis

4.8.3.1 Methodology and Significance Criteria

The evaluation of impacts of hazards and hazardous materials from construction and operation of the proposed project was based on the review of relevant federal, state, county, and local laws, regulations, plans (e.g., emergency response and hazard mitigation plans), policy documents, and standards, as well as hazards and hazardous materials that would be associated with construction, operation, and maintenance of the proposed project components, as described in Chapter 2, "Project Description." State, county, and local maps were reviewed to determine the location of proposed project components in proximity to schools, known hazardous materials sites, airports, and fire severity zones as classified by CALFIRE. The results of Cortese List database searches for known hazardous materials sites were reviewed as described in Section 4.8.1.1.

Potential impacts from hazards and hazardous materials were evaluated according to the following significance criteria. The criteria were defined based on the checklist items presented in Appendix G of the CEQA Guidelines. The proposed project would cause a significant impact related to hazards and hazardous materials if it would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school;

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.; and

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

4.8.3.2 Applicant Proposed Measures

As part of the proposed project design, the applicant has committed to the following applicant proposed measure (APM) as part of the design of the proposed project:

APM GEN-1: The applicant would develop a Worker Environmental Awareness Plan. The applicant would also prepare a presentation used to train all site personnel prior to the commencement of work. A record of all trained personnel would be kept.

In addition to instruction on compliance with APMs and any mitigation measures identified, all construction personnel would also receive the following:

- A list of phone numbers for the applicant's environmental specialist personnel associated with the proposed project (archaeologist, biologist, environmental compliance coordinator, and regional spill response coordinator).
- Instruction on the Santa Barbara County APCD and Ventura County APCD fugitive dust rules.
- Instruction on biological resources (including special-status species and other sensitive habitats and resources that could occur in the vicinity of the proposed project); the locations of sensitive resources; the legal status and protection afforded these species; and the measures to be implemented for avoidance and minimization of impacts to the resources. Penalties for violations of environmental laws will also be incorporated into the training.
- A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to historic preservation; a discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and the applicant policies; a review of

archaeology, history, prehistory, Native American cultures, and paleontological resources in the proposed project vicinity; and instruction regarding what typical cultural resources look like.

- Instruction regarding the procedures to be implemented should unanticipated cultural resources (as well as paleontological resources) be encountered during construction activities, including stopping work in the vicinity of the find and contacting the archaeologist or environmental compliance coordinator, who would provide guidance on how to proceed.
- Instruction regarding the importance of maintaining a clean construction site, including ensuring that all food scraps, wrappers, food containers, cans, bottles, and other trash from the proposed project are deposited in closed trash containers. Trash containers would be removed from the project area as required and would not be permitted to overfill.
- Instruction regarding the individual responsibilities under the Clean Water Act, the project SWPPP, site-specific BMPs, and the location of Material Safety Data Sheets for the proposed project.
- Instructions to notify the foreman and regional spill response coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination.
- A copy of the truck routes to be used for material delivery.
- Instruction that noncompliance with any laws, rules, regulations, or mitigation measures could result in being barred from participating in any remaining construction activities associated with the proposed project.

4.8.3.3 Environmental Impacts

Impact HZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
LESS THAN SIGNIFICANT

Construction

Construction activities associated with the proposed project would involve transport, use, and disposal of hazardous materials. This would include the use of hazardous materials typically used by construction vehicles and heavy equipment (e.g., gasoline, diesel fuel, transmission fluid, brake fluid, hydraulic fluid, solvents, motor oils, and lubricating grease), primarily within the subtransmission line rights-of-way and at the project staging areas. Additionally, on a more temporary basis, construction of the subtransmission line and substation work would involve the use of other potentially hazardous materials, including welding materials, propane, canned spray paint, paint thinner, battery acid in the substation control rooms, and insect repellant. All hazardous materials would be used, transported, and disposed of in accordance with applicable regulations.

Construction of the proposed project would also generate hazardous waste that requires disposal. This would include the removal of chemically treated utility wood waste (e.g., wood poles and cross arms) from the existing 66-kilovolt (kV) subtransmission lines. Old transformers with the potential to release polychlorinated biphenyl (PCB)-containing oil, petroleum hydrocarbons, and lead into the environment would also be removed and replaced at the upgraded Carpinteria,

Casitas, and Santa Barbara Substations during construction. All treated utility wood waste would be repurposed or disposed of as hazardous waste by an approved SCE contractor, pursuant to SCE waste management and agency requirements. If disposal is required, the treated utility wood waste would be taken to the Simi Valley Landfill, which is a solid waste facility approved by the Los Angeles RWQCB to accept treated wood waste (CalRecycle 2013). Other project-related hazardous solid waste requiring landfill disposal would be treated as follows: any bulk soil generated that meets RCRA or non-RCRA criteria for hazardous waste would be disposed of at the Clean Harbors Buttonwillow Landfill in Buttonwillow, California. Should bulk soil be generated that meets TSCA waste criteria, the bulk soil would be shipped to either Clean Harbors Grassy Mountain facility in Utah or the U.S. Ecology landfill in Beatty, Nevada. Non-bulk (drums) hazardous waste meeting RCRA, non-RCRA, and/or TSCA criteria for hazardous waste would be transported by an appropriately licensed hauler to the Clean Harbors, Los Angeles facility for disposal.

The applicant would comply with applicable laws and regulations regarding routine transport, use, or disposal of hazardous materials. In addition, APM GEN-1 would require that all staff receive Worker Environmental Awareness Training, which would include instruction regarding the individual responsibilities under the Clean Water Act, the project SWPPP, site-specific BMPs, and the location of Material Safety Data Sheets for the proposed project, as well as instructions to notify the foreman and regional spill response coordinator in case of a hazardous materials spill or leak from equipment, or upon the discovery of soil or groundwater contamination, among other measures. Staff training would reduce the potential of the proposed project to create a significant hazard through the routine transport, use, and disposal of hazardous materials. Therefore, impacts under this criterion would be less than significant without mitigation.

Operation

Operation and maintenance activities would be similar to those associated with the existing 66-kV subtransmission and substations. The newly installed transformers that would be used at the Carpinteria, Casitas, and Santa Clara Substations during project operations would use mineral oil (a highly refined hydrocarbon-based substance that is not considered a hazardous material) for transformer insulation purposes and would not contain materials of concern (e.g., PCBs or lead) that are typically found in oils used by old transformers. Therefore, installing the new transformers would reduce the risk of hazardous spills during operations. In accordance with applicable laws and regulations, SCE would update the SPCC Plans for the existing Carpinteria, Casitas, and Santa Clara Substation facilities to describe how hazardous materials released from electrical equipment would be diverted and directed toward containment structures and how contained hazardous materials would be stored within a temporary containment area with sufficient containment capacity. Additionally, the HMBP for the existing substation facilities would be updated to describe and identify storage areas for hazardous materials and waste; describe appropriate handling, storage, and disposal techniques; and include measures for avoiding and addressing spills. Operation of the project would comply with all applicable laws and regulations. Therefore, impacts associated with the routine use, transport, and disposal of hazardous materials during operation would be less than significant without mitigation.

Impact HZ-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
LESS THAN SIGNIFICANT

The routine transport, use, and disposal of hazardous materials as described in Impact HZ-1 would be unlikely to result in accidental releases or spills, representing a potential hazard to the public during project construction and operations. As part of the proposed project, SCE would implement APM GEN-1, which requires that they provide Material Safety Data Sheets to project construction crews and SCE personnel for hazardous materials that would be present at the project construction site. In addition, all staff would undergo Worker Environmental Awareness Program (WEAP) Training that would include instructions in case of a spill or release of hazardous materials, and would comply with applicable laws and regulations regarding the use, transportation, and disposal of hazardous materials; therefore, impacts under this criterion would be less than significant impact without mitigation.

Operation and maintenance activities would be similar to those associated with the existing 66-kV subtransmission and substations. Operation of the upgraded substations would require the continued use of electrical transformers; however, as stated above, the newly installed transformers would use a non-toxic substance for transformer insulation purposes. Therefore, installing the new transformers would reduce the risk of hazardous spills during operations. SCE would update the SPCC Plans for the existing Carpinteria, Casitas, and Santa Clara Substation facilities to describe how hazardous materials released from electrical equipment would be diverted and directed toward containment structures, and how contained hazardous materials would be stored within a temporary containment area with sufficient containment capacity. Additionally, the HMBP for the existing substation facilities would be updated to describe and identify storage areas for hazardous materials and waste; describe appropriate handling, storage, and disposal techniques; and include measures for avoiding and addressing spills. Therefore, impacts associated with the accidental release of hazardous materials during operation would be less than significant.

Impact HZ-3: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.
LESS THAN SIGNIFICANT

Four schools are located within 0.25 miles of the proposed project components. Construction of the proposed project would involve the limited transport and use of hazardous liquids (e.g., gasoline, solvents, and lubricating fluids). These types of hazardous materials are commonly used during construction activities associated with commercial, residential, and industrial projects. Compliance with federal, state, and local regulations and implementation of APM GEN-1, would ensure that impacts under this criterion are less than significant without mitigation, as described in Impact HZ-1.

Diesel-powered vehicles and construction equipment would be used during construction of the proposed project. Diesel exhaust emissions are considered toxic emissions by the California Air Resources Board. Diesel exhaust would be emitted within 0.25 miles of schools in the vicinity of the project; however, because construction activities would be temporary and would not take place at any single location for an extended period, impacts due to diesel exhaust emissions would be less than significant without mitigation.

Impact HZ-4: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

LESS THAN SIGNIFICANT WITH MITIGATION

As described in Section 4.8.1.1, the results of Cortese List (Government Code Section 65962.5) database searches did not identify any SWRCB Geotracker sites, solid waste disposal sites, sites with Cease and Desist Orders or Cleanup and Abatement Orders, or DTSC EnviroStor or hazardous material sites within 1,000 feet of components of the proposed project. Although search results of the databases that compose the Cortese List found no hazardous sites near the project, there is still the minor potential for an unrecorded hazardous site to be present on site. During construction activities, the applicant or its contractor may encounter subsurface structures, such as pipelines or unknown/undetected storage tanks, or materials resulting in a release of contaminants such as lead, asbestos, pesticides, or fuel that may be associated with past uses. The spread of discovered contaminant would result in a significant impact. MM HZ-1 would require the applicant to prepare and implement a Contaminated Soil/Groundwater Contingency Plan in case hazardous material is found on site. Implementation of MM HZ-1 would reduce the potential to spread contaminated soils or waters, which would reduce impacts to a less than significant level.

Impact HZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.

NO IMPACT

The proposed project would not be located within an airport land use plan or within 2 miles of a public airport. The alignment of the project and the terrain in the region would require FAA notification due to the height above ground of the conductor or telecommunication cable between towers. In accordance with regulations, the applicant would file FAA form 7460, Notice of Proposed Construction or Alteration for structures or lines as outlined in FAA Part 77 prior to construction. The FAA's response to form 7460 may identify conductor spans that would require marker balls and/or poles or towers that would require red lighting directed upwards and outwards toward potential aviation traffic. All FAA recommendations would be implemented into the design of the project. In compliance with FAA regulations, safety hazards would be avoided for people residing or working in the project area. Therefore, there would be no impact under this criterion.

Impact HZ-6: For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.

NO IMPACT

The proposed project would not be located within the vicinity of a private airstrip. As discussed under Impact HZ -5, above, the alignment of the project and the terrain in the region would require FAA notification due to the height above ground of the conductor or telecommunication cable between towers. In accordance with regulations, the applicant would file FAA form 7460 for structures or lines, as outlined in FAA Part 77, prior to construction. All FAA recommendations, as discussed under Impact HZ-6 above, would be implemented into the design of the project. Compliance with FAA regulations would avoid any safety hazards for people residing or working in the project area. Therefore, there would be no impact under this criterion.

Impact HZ-7: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
LESS THAN SIGNIFICANT WITH MITIGATION

Construction

The proposed project would require temporary or single-lane closure of several roadways during construction or maintenance activities; however, none of the road closures would occur along roads that have been identified as part of an emergency response or evacuation plan. All lane closures would use a traffic control service and would be conducted in accordance with local ordinances and city permit conditions. As further discussed in Section 4.15, "Traffic and Transportation." the applicant would implement MM TT-1, Traffic Control Plan, and MM TT-2, Commuter Plan, during project construction to minimize short-term construction-related impacts on local traffic, including emergency access. MM TT-1, Traffic Control Plan, would include measures consistent with those published in the California Joint Utility Traffic Control Manual (California Inter-Utility Coordinating Committee 2010) and the applicant to coordinate with local jurisdictions and emergency service providers prior to any road closures. MM TT-2, Commuter Plan would require the applicant to develop a plan for construction workers to meet at the SCE Ventura Service Center and Staging Yards 1 and 5 and carpool to the project site. As a result, travel routes for emergency vehicles would remain unobstructed and adequate during both construction and operation phases of the proposed project. Therefore, impacts to adopted emergency response plans or emergency evacuation plans would be less than significant.

Operations

Operation and maintenance activities associated with the project would be similar to those associated with the existing 66-kV subtransmission and substations. In the event that any operation or maintenance activity may cause a roadway blockage or closure, SCE would follow the same procedures described above (e.g., coordination with local jurisdictions and emergency responders, consistency with local ordinances, etc.) to avoid causing delays or restricting access. Impacts under this criterion during operation would be less than significant.

In addition, implementation of the project is intended to increase the reliability of SCE's existing electrical system in the South Coast of Santa Barbara County service area during emergency conditions, while also enhancing operational flexibility. As a result, operation of the proposed project would improve the provision of electrical service during emergency situations, which could facilitate the implementation of emergency response plans.

Impact HZ-8: Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.
LESS THAN SIGNIFICANT IMPACT WITH MITIGATION

Construction

Several of the proposed project components are located in areas that are designated by CALFIRE as Very High Fire Hazard Severity Zones (see Figure 4.8-1) due to flammable native vegetation, dry weather conditions, and high winds. Construction, operation, and maintenance activities associated with the proposed project would increase fire risk during refueling, vehicle and equipment use, welding, vegetation clearing, worker cigarette smoking, and other activities. Fires could be started

when objects contact the subtransmission lines or other energized equipment, when a live-phase conductor falls to the ground, due to conductor-to-conductor contact, or due to power surges.

Additionally, the subtransmission line components of the proposed project would be consistent with California Public Resources Code Sections 4291 through 4299, which regulate vegetation management. Per these regulations, the applicant would maintain vegetation clearance areas around the substation and subtransmission lines. The proposed project would also be constructed consistent with CPUC GOs 95 and 165 regarding subtransmission line construction.

Construction activities of the proposed project would substantially increase fire risk regardless of vegetation clearing, and compliance with applicable laws, regulations, and standards. MM HZ-2 would require the applicant to develop a Fire Control and Emergency Response Plan. This plan would be developed in coordination with local fire departments and would identify fire prevention measures and response and communication protocols in the event of an emergency. Implementation of MM HZ-2 would reduce impacts associated with increased fire risk to less than significant levels.

Operation

Operation and maintenance activities would be similar to those associated with the existing 66-kV subtransmission and substations. The subtransmission lines and substations would continue to be maintained and inspected in accordance with California Public Resources Code Sections 4291 through 4299 and CPUC GOs 95 and 165. Operation activities associated with the proposed project would not significantly increase fire risk from the existing conditions.

Additionally, the 66-kV subtransmission line reconductoring and telecommunication route project components would involve the replacement of older infrastructure, such as wooden structures, conductor wire, and supporting structures, with new elements such as conductor wire and steel poles. Older electrical infrastructure components are more likely to sag and break, resulting in downed power line conditions, and thus represent a higher fire risk than newer poles and wire. Additionally, the reestablishment and improvement of access roads would improve access for emergency vehicles to rural areas. Because the proposed project would result in upgrades from older infrastructure along the 66-kV subtransmission line and telecommunications routes and to access roads, the proposed project would reduce the fire risk associated with these components.

4.8.4 Mitigation Measures

MM HZ-1: Contaminated Soil/Groundwater Contingency Plan. The applicant will submit a Contaminated Soil/Groundwater Contingency Plan prior to start of construction to address unanticipated unearthing or exposure of buried hazardous materials or contamination or contaminated groundwater. The final Contaminated Soil/Groundwater Contingency Plan shall be implemented, as specified, throughout construction and restoration. This plan will detail steps that the applicant or its contractor will take to prevent the spread of contamination, the sampling necessary if contamination is discovered, and remedial action. At minimum, the plan will include the following:

1. Contact information and procedures for federal, regional, and local agencies; the applicant's environmental coordinator(s) responsible for the cleanup of contaminated soil or groundwater; and licensed disposal facilities and haulers.

2. Procedures to minimize environmental impacts in the event that hazardous soils or other materials are encountered during construction, including stopping work; securing and marking the contaminated area; preventing the spread of contamination; testing; primary, secondary, and final cleanup procedures; and proper disposal in accordance with applicable laws and regulations.
3. Training requirements for construction workers performing excavation activities and identifying potentially hazardous contamination (e.g., stained or discolored soil and odor).

MM HZ-2: Fire Control and Emergency Response Plan. Prior to construction, the applicant will develop and implement a Fire Control and Emergency Response Plan. The final Fire Control and Emergency Response Plan shall be implemented, as specified, throughout construction and restoration. This plan, and a record of contact and coordination with local fire departments, will be submitted to the CPUC for review and approval prior to construction of the proposed project. The plan will describe fire prevention and response practices that the applicant will implement during construction and operation of the proposed project to minimize the risk of fire and, in the case of fire, provide for immediate suppression and notification. The plan will include:

- Fire prevention and response practices regarding the dispensing and storage of gasoline, diesel, and other fuels and combustible chemicals; power tool and equipment use; emergency access; fire suppression equipment and training; electrical grounding; and vegetation clearing; and
- Communication protocols for on-site workers to coordinate with local agencies and emergency personnel and for the applicant's environmental health and safety personnel to coordinate with on-site workers in the event of fire, flood, or other emergencies or increased risk of emergency during construction or operation of the project.

The plan will define requirements for:

- Contacting CALFIRE at least two days prior to periods during which helicopters would be used to provide radio frequencies to be used by the helicopters; helicopter identifier data; and information about the number of helicopters to be used, dates of helicopter use, helicopter flight patterns, construction areas where helicopters would be used, and fueling and landing areas;
- Designating on-site fire patrol personnel who will monitor fire prevention activities during construction and have full authority to stop construction to prevent fire hazards;
- Reviewing the Fire Control and Emergency Response Plan with designated on-site fire patrol personnel and all other workers prior to commencing construction at each project area;
- Confining welding or blow torch activities to cleared areas having a minimum radius of 10 feet, measured from place of welding. If welding or blow torch activities occur within the right-of-way of the transmission or subtransmission line within High or Very High Fire Hazard Severity Zones as defined by CALFIRE, a fire patrol person will observe the operation;
- Prohibiting smoking at all work areas within High and Very High Fire Hazard Severity Zones as defined by CALFIRE during construction and operation of the project;
- Ensuring that all vehicles used for construction and operation of the project carry fire suppression equipment;

- The use of spark arrestors;
- Furnishing tools (e.g., shovels), equipment (e.g., fire extinguishers), and materials necessary to prevent fires, control the spread of fire if started, and providing assistance to extinguish fires started as a result of construction of the project;
- Providing the applicant's workforce and equipment to extinguish uncontrolled fire near project work areas as directed by the USFS, CALFIRE, or local fire department representatives; and
- Ceasing any or all work activities, including helicopter use, as directed by the USFS, CALFIRE, or local fire department representatives in response to fire incidents.

4.9 Hydrology and Water Quality

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to hydrology and water quality. Impacts from geologic hazards are discussed in Section 4.6, "Geology, Soils, and Mineral Resources," impacts on wetlands and aquatic habitats are discussed in Section 4.4, "Biological Resources," and impacts related to water quantity and water use are included in Section 4.13, "Population and Housing."

4.9.1 Environmental Setting

4.9.1.1 Hydrology and Water Quality in the Project Area

For ease of discussion, this section divides the project area into the Northern Project Area, which consists of Segment 3A, portions of Segments 3B and 4, and the Carpinteria Substation, and the Southern Project Area, which consists of Segments1 and 2, portions of Segments 3B and 4, the Santa Clara and Casitas Substations, and the Getty Tap.

Surface Water

Surface waters associated with the Northern Project Area are included in the Central Coast Hydrological Region (DWR 2009a) or Hydrologic Unit Code 1806 (USGS 2013). In the Northern Project Area, coastal streams flow south from the southern foothills of the Santa Ynez Mountains towards the Pacific Ocean. Surface drainage occurs via Carpinteria, Franklin, Gobernador, Rincon, and Santa Monica Creeks. Average precipitation in the Carpinteria Groundwater Basin ranges from 15 to 19 inches per year (DWR 2004a).

Surface waters associated with the Southern Project Area are included in the South Coast Hydrological Region (DWR 2009b) or Hydrologic Unit Code 1806 (USGS 2013). In the Southern Project Area, coastal streams flow south and southwest from the southern foothills of the Santa Ynez Mountains towards the Pacific Ocean, except near Lake Casitas, where surface water flows north from the Southern Project Area into the lake. Surface drainage occurs via the Ventura and Santa Clara Rivers and their tributaries. Average precipitation in these basins ranges from 12 to 16 inches per year (DWR 2004b, 2004c).

Agriculture, urban runoff/storm sewers, groundwater loadings, and land development affect surface water quality in the project area as a whole. In addition, natural sources such as highly mineralized bedrock can affect surface water quality. Table 4.9-1 list the surface water bodies in the project area and any analytes that do not meet water quality standards.

Groundwater

The following groundwater summary is based on *California's Groundwater*, Bulletin 118 (DWR 2004a, 2004b, 2004c). Sections referencing specific groundwater basins in the report have been updated since the 2004 publication; the latest version of groundwater basin description is used and referenced here.

Table 4.9-1 Summary of Water Quality Impairments in the Study Area Watersheds

Watershed	Waterbody Name	303d List Pollutants(s)
Central Coast Hydrologic Region	Carpinteria Creek	Chlorpyrifos, Escherichia coli (E. coli), Fecal Coliform, Low Dissolved Oxygen, Sodium
	Carpinteria Marsh (El Estero Marsh)	Nutrients, Organic Enrichment/Low Dissolved Oxygen, Priority Organics
	Franklin Creek	Chlorpyrifos, Escherichia coli (E. coli), Fecal Coliform, Nitrate, pH, Sodium
	Gobernador Creek	Data Not Available
	Rincon Creek	Boron, Chloride, Escherichia coli (E. coli), Fecal Coliform, Sodium, Turbidity
	Santa Monica Creek	Fecal Coliform, pH
South Coast Hydrologic Region	Ventura River Estuary	Trash
	Ventura River (estuary to Weldon Canyon)	Algae
	Ventura River (Weldon Canyon to Coyote Creek)	Indicator Bacteria, Pumping, Water diversion
	Ventura River (Coyote Creek to Camino Cielo Road)	Pumping, Water Diversion
	Canada Larga Creek (Tributary to the Ventura River)	Low Dissolved Oxygen, Total Dissolved Solids
	San Antonio Creek (Tributary to the Ventura River)	Indicator Bacteria, Total Dissolved Solids
	Matilija Creek, North Fork (Tributary to the Ventura River)	None Listed
	Matilja Reservoir	Fish Barriers
	Matilija Creek (Tributary to the Ventura River)	Fish Barriers
	Santa Clara River Estuary	ChemA, Coliform Bacteria, Nitrogen Nitrate, Toxaphene, Toxicity
	Santa Clara River (Estuary to Hwy 101 Bridge)	Toxicity
	Santa Clara River (Freeman Diversion to A Street)	Ammonia, Chloride, Total Dissolved Solids, Toxicity
	Lake Casitas Reservoir Coastal Beaches	Mercury Indicator Bacteria

Source: SWRCB 2013

Northern Project Area

Groundwater associated with the northern project area is within the Carpinteria Groundwater Basin (Groundwater Basin Number 3-18), which is part of the Central Coast Hydrologic Region. The basin is bounded to the north by the Santa Ynez Mountains, to the south and southwest by the Pacific Ocean, and the west by Toro Canyon.

Holocene and Pleistocene age alluvium is present within the basin. Holocene alluvium, which underlies and forms the main agricultural plains in the basin, consists mainly of fine-grained clay and silt and some sand, with local bodies of gravel at the base. The lower part of this alluvium

contains thick beds of clay that confine groundwater in the underlying formation. Within the northern project area, Pleistocene alluvium is present in the lower part of Toro Canyon. This alluvium can be up to 250 feet thick and thins as it approaches the mountains. Pleistocene alluvium in the basin consists of clay, sand, and gravel in lenticular beds. The primary water yielding materials are the discontinuous lenses of sands and gravels and are not widespread. Well yields are generally moderate.

In the Carpinteria Groundwater Basin, groundwater is found in the alluvium, and the Carpinteria, Casitas, and Santa Barbara Formations. Average specific yield for these water-bearing formations is estimated to be 10 percent. The Carpinteria Formation has a thickness up to 75 feet and consists of Pleistocene age unconsolidated to poorly consolidated sands with variable amounts of gravels and cobbles. The Casitas Formation has a thickness of 1,000 to 3,000 feet and consists of Pleistocene age poorly to moderately consolidated clays, silts, sands, and gravels. In the Casitas Formation, groundwater is confined and well yields are generally moderate. The Casitas Formation is the chief water-bearing unit in the Carpinteria Groundwater Basin. The Santa Barbara Formation has a thickness of up to 2,000 feet and consists of Pleistocene age poorly to moderately consolidated marine sands, silts, and clays. Groundwater is also confined within the Santa Barbara Formation.

Groundwater in the Carpinteria Groundwater Basin can be characterized as primarily calcium bicarbonate, with variable amounts of sodium. Groundwater quality is reported as generally stable, with no trends toward impairment. However, historical data have shown elevated levels of nitrates.

Estimates of the total storage capacity of the Carpinteria Groundwater Basin range from 140,000 acre-feet (DWR 1975) to 700,000 acre-feet (CVWD 1996). Total usable groundwater in storage has been estimated to be approximately 19,000 acre-feet, while total groundwater volume in storage calculated from sea level is 700,000 acre-feet.

Southern Project Area

Groundwater associated with the southern project area is within the Ventura River Valley Groundwater Basin (Groundwater Basin 4-3) and the Santa Clara River Valley Groundwater Basin (Groundwater Basin 4-4), which are part of the South Coast Hydrologic Region.

The Ventura River Valley Groundwater Basin is divided into two subbasins, the Upper Ventura Subbasin (Groundwater Basin 4-3.01) and the Lower Ventura Subbasin (Groundwater Basin 4-3.02). Groundwater within the Upper Ventura Subbasin is primarily found within Holocene and Pleistocene age alluvium and is unconfined. The average specific yield is estimated to be 8 percent. The alluvium ranges in thickness from 60 to 100 feet. Groundwater quality indicates that some parts of the basin have elevated levels of total dissolved solids. Total storage capacity of the Upper Ventura Subbasin has been estimated to be from 10,000 to 35,118 acre-feet. Groundwater in storage is estimated to be 31,600 acre-feet.

Groundwater within the Lower Ventura River Subbasin is found within the alluvium and the San Pedro formation, and is unconfined. The average specific yield is estimated to be 8 percent. The alluvium consists of Holocene and Pleistocene age sands, gravels, and clays, ranging in thickness from 60 to 100 feet. The San Pedro Formation consists of gravels, sands, silts, and clays. Groundwater in the Lower Ventura River Subbasin can be characterized as sodium bicarbonate. Some parts of the basin have elevated levels of hydrogen sulfide gas. High sulfates and nitrates are common in the shallow alluvium along drainage courses where most water wells are found. In addition, oil has been found in groundwater. Total storage capacity of the Lower Ventura Subbasin has been estimated to be 264,000 acre-feet. Total groundwater in storage has not been estimated.

The Santa Clara River Valley Groundwater Basin is divided into two subbasins, the Oxnard Subbasin (Groundwater Basin 4.4-02) and the Mound Subbasin (Groundwater Basin 4-4.03). The Oxnard Subbasin is bounded to the west by the Pacific Ocean. Groundwater within the Oxnard Subbasin is within five recognized aquifers, which extend offshore and may outcrop on the ocean floor. The Oxnard Aquifer and the Fox Canyon Aquifer are the two primary freshwater-bearing units. The average specific yield for these aquifers is estimated to be 16 percent. The Oxnard Aquifer consists of Holocene and Pleistocene age sands and gravels deposited within the Oxnard alluvial plain. The Fox Canyon Aquifer consists of gravels at the base of the San Pedro Formation that range from 100 to 300 feet in thickness. Groundwater in some parts of the basin has elevated levels of nitrates, dichlorodiphenyltrichloroethane (DDT) and polychlorinated biphenyls (PCBs). In addition, seawater intrusion has occurred in the subbasin. Total onshore capacity of the Oxnard Subbasin has been estimated to be 7,140,000 acre-feet. Groundwater in storage was estimated to be 5,380,000 acre-feet in 1999.

Groundwater within the Mound Subbasin is primarily in the alluvium (unconfined) and the San Pedro Formation (confined in the west). The average specific yield is estimated to be 8 percent. The alluvium consists of Holocene and Pleistocene age silts and clays with lenses of sands and gravels. The alluvium has a thickness up to 500 feet. The San Pedro Formation consists of fine sands and gravels. The San Pedro Formation has a depth up to 4,000 feet below ground surface. A wide range of concentrations of total dissolved solids is found in groundwater in the basin, from 90 to 2,088 milligrams per liter. Other water quality impairments are unknown. Total storage capacity of the Mound Subbasin has been estimated to be 153,000 acre-feet. Groundwater storage is estimated to be 110,000 acre-feet.

Wetlands

No wetlands were detected within the project footprint during a preliminary wetland delineation that was performed on May 14 and 15, 2013 (BioResource Consultants 2013). Wetlands and other waters are discussed in Section 4.4, “Biological Resources,” of this report.

Flood Zones

Areas of Ventura and Santa Barbara Counties are highly susceptible to flooding and flood damage due to numerous small tributaries draining steep watersheds in the coastal mountains. During periods of intense rain, runoff water can potentially exceed the storage capacity of the drainage systems, causing flooding. Ventura County has implemented mitigation measures to reduce the effects of flooding. In upland areas, where streams and steep topography can cause rapid flooding, dams or basins are used to dissipate flow and trap debris, reducing the effects on areas downstream. The Ventura River Project was approved in 1956 and was designed to capture seasonal floodwaters that would otherwise go to the ocean. This project included the construction of the Casitas Dam, Lake Casitas Reservoir, Robles Diversion Dam, Robles-Casitas Canal, and their

conveyance systems. Lake Casitas Reservoir has a storage capacity of 254,000 acre-feet. The Matilda Reservoir Dam (3800 acre-feet), Stewart Canyon Dam (203.5 acre-feet), and the Senior Canyon Dam (78 acre-feet) are also present in the Ventura River watershed (U.S. Bureau of Reclamation 2013).

In addition, the coastlines of Ventura and Santa Barbara Counties are susceptible to tidal flooding, storm surge, and wave action in the narrow areas immediately adjacent to the tidal zone. Tsunamis, which are sea waves caused by earthquakes or undersea landslides, are also a source of coastal flooding in Ventura and Santa Barbara Counties.

Floodplain mapping indicates that the Carpinteria Substation is located immediately adjacent to the floodplain associated with Franklin Creek (Figure 4.9-1). The northwest corner of the substation may be subject to flooding when Franklin Creek exceeds its capacity. The Casitas Substation is located adjacent to the floodplain of the Ventura River (Figure 4.9-1). The Casitas Substation is not subject to flooding because it is located approximately 20 feet in elevation above the floodplain.

Water Supply and Usage for the Proposed Project

During project construction, 393 acre-feet of water would be used for dust control and other purposes. All water would be obtained from providers who use both surface water and groundwater. During operations, water would be used for landscaping and sanitary purposes at the three substations (Carpinteria Substation, Casitas Substation, and Santa Clara Substation). These water use activities are currently occurring at the substations and would represent a continuation of existing operations and maintenance procedures; therefore, no change in water use is anticipated. For impacts related to water supply and water usage see Section 4.13, "Public Services and Utilities."

4.9.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern hydrology and water quality in the project area.

4.9.2.1 Federal

The Clean Water Act of 1972, as amended in 2002

The Clean Water Act (CWA) regulates water quality in the United States. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. These waters include all navigable waters, tributaries, and adjacent wetlands. Wetlands, drainages, creeks, and streams are generally subject to the jurisdiction of the United States Army Corps of Engineers (USACE) under Section 404 of the CWA. By USACE definition, all aquatic or riverine habitats between the "ordinary high water mark" of rivers, creeks, and streams are potentially considered "waters of the United States" and may fall under USACE jurisdiction. Any deposit of fill into waters of the United States, including wetlands, requires the acquisition of a permit from the USACE pursuant to Section 404 of the CWA.

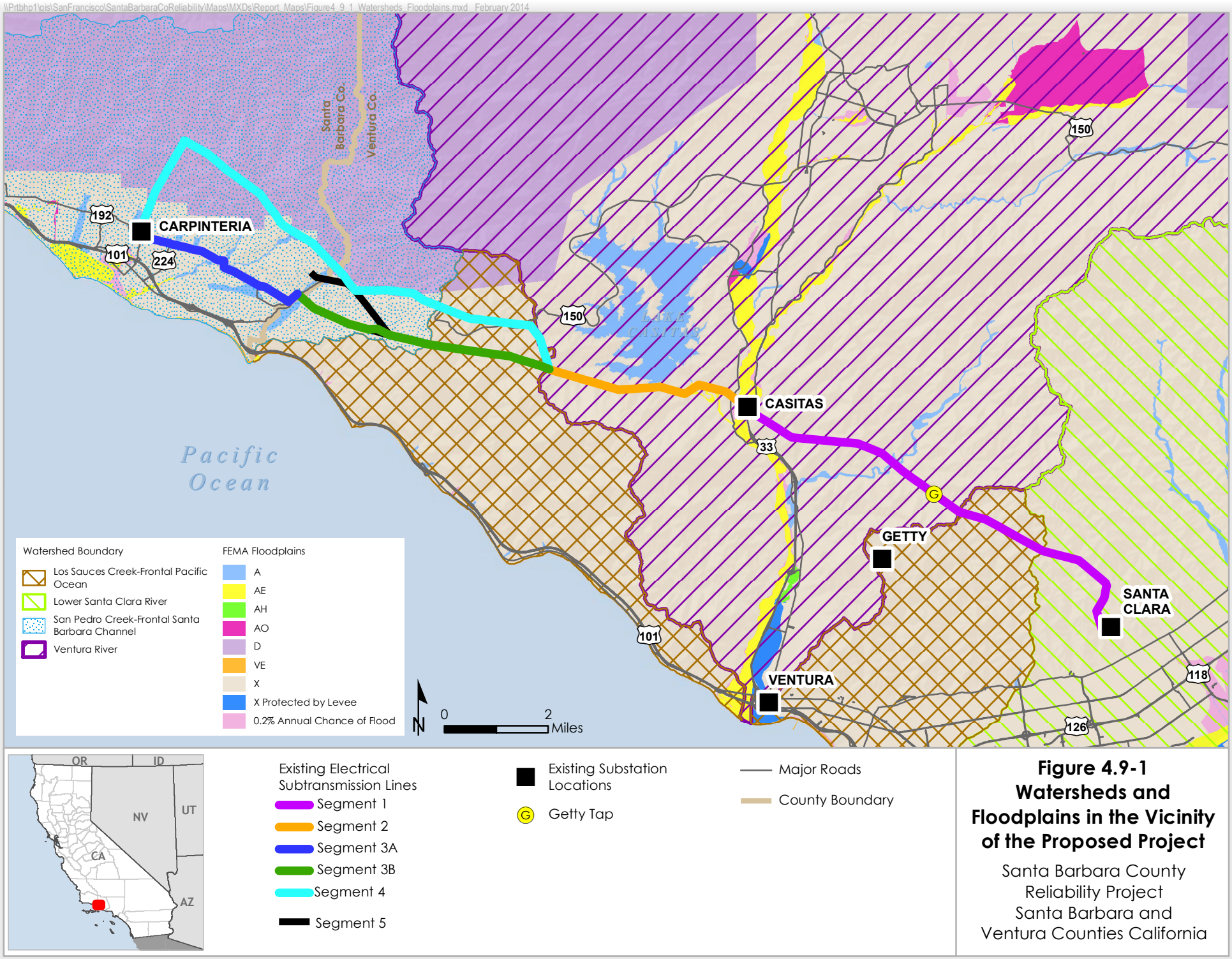

Figure 4.9-1
Watersheds and Floodplains in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

Section 401 of the CWA requires that every applicant for a federal permit or license for any activity that may result in discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with state water quality standards. In California, 401 Certification is granted by the Regional Water Quality Control Board (RWQCB) for projects that are located in a single region, or by the State Water Quality Control Board (SWRCB) for multi-regional projects. Portions of the project would be located within the Regional Water Quality Control Board's Central Region (Region 3) and within the Los Angeles Region (Region 4). Therefore, the SWRCB would be responsible for issuance of a 401 Water Quality Certification. Conditions placed on the issuance of a Section 401 certification by the SWRCB become part of the Section 404 permit issued by the USACE, and a Section 404 permit cannot be issued if Section 401 certification is denied.

Section 303(d) of the CWA (CWA, 33 U.S. Code 1250 et seq., at 1313(d)) requires states to identify "impaired" water bodies as those that do not meet water quality standards. States are required to compile this information and submit it as a list to the U.S. Environmental Protection Agency (EPA) for review and approval. This list is known as the Section 303(d) list of impaired waters. As part of this listing process, states are required to prioritize waters and watersheds for future development of total maximum daily load (TMDL) requirements. The SWRCB and RWQCBs are engaged in ongoing efforts to monitor and assess water quality, to prepare the Section 303(d) list, and to develop TMDL requirements.

As authorized by Section 402 of the CWA, the SWRCB administers the statewide National Pollution Discharge Elimination System (NPDES) Construction Storm Water General Permit (NPDES Permit, 2009-0009-DWQ as amended by 2010-0014-DWQ), which covers a variety of construction activities that could result in wastewater discharges. Under this system, the State issues project-level Construction General Permits for projects that disturb more than 1 acre of land. The SWRCB Construction General Permit process involves the notification of the construction activity by providing a Notice of Intent to the SWRCB, the development of a Storm Water Pollution Prevention Plan (SWPPP), and the implementation of water quality monitoring activities as required. The purpose of a SWPPP is to:

- Identify all pollutant sources that may affect the quality of discharges of storm water associated with construction activity from the construction site;
- Identify non–storm water discharges;
- Identify, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non–storm water discharges from the site during construction;
- Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed;
- Identify a sampling and analysis strategy and sampling schedule for discharges from construction activity that discharge directly to a water body listed for impairment due to sedimentation, in accordance with Section 303(d) of the CWA; and
- Identify a sampling and analysis strategy and sampling schedule for discharges that have been discovered through visual monitoring to be potentially contaminated by pollutants not visually detectable in the runoff.

Safe Drinking Water Act

The Safe Drinking Water Act (42 U.S.C. §300[f] et seq. [1974]) was passed in 1974 (and amended in 1986 and 1996) to protect public health by regulating the nation's public drinking water supply. This law requires many actions to protect drinking water and its sources, which include rivers, lakes, reservoirs, springs, and groundwater wells. It authorizes the U.S. Environmental Protection Agency (EPA) to set national health-based standards for drinking water to protect against both naturally occurring and human-caused contaminants that may be found in drinking water. It also mandates the development of a Groundwater/Wellhead Protection Program by each state in order to protect groundwater resources that serve as a public drinking water source.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA), an agency within the Department of Homeland Security, administers the National Flood Insurance Program (NFIP). The NFIP is a federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. Participation in the NFIP is based on an agreement between local communities and the federal government, which states that if a community adopts and enforces a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas, the federal government will make flood insurance available within the community as a financial protection against flood losses.

In support of the NFIP, FEMA identifies flood hazard areas throughout the United States and its territories by producing Flood Hazard Boundary Maps, Flood Insurance Rate Maps, and Flood Boundary and Floodway Maps. Several areas of flood hazards are commonly identified on these maps. One of these areas is a Special Flood Hazard Area; this term designates any area with a 1 percent chance of being inundated by a flood in any given year (also referred to as the base flood).

4.9.2.2 State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) General Order 131-D describes that the CPUC has jurisdiction over the siting and design of public utilities in California. However, the CPUC is required to consult with local agencies requiring land use matters.

Porter–Cologne Water Quality Control Act (Porter–Cologne Act)

The Porter–Cologne Act (California Water Code, Division 7), passed in 1969, regulates surface water and groundwater quality in the state and also assigns to the SWRCB responsibility for implementing CWA Sections 401 (Water Quality Certification), 402 (NPDES), 303(d) (List of Impaired Water Bodies), and 305(b) (Report on the Quality of Waters in California), and the SWRCB has delegated the authority to the nine RWQCBs. The SWRCB and RWQCBs are responsible for issuing permits for certain point source discharges and for regulating construction and storm water runoff.

The RWQCBs regulate discharges to waters within their respective jurisdictions through administration of NPDES permits, waste discharge requirements, and CWA Section 401 water quality certifications. RWQCBs administer Section 401 water quality certifications to ensure that projects with federal 404 permits do not violate State water quality standards. The SWRCB has jurisdiction over depositing fill or dredging in "State Only Waters" and issues Waste Discharge

Requirements for these projects. Construction projects may require RWQCB approval of a 401 Water Quality Certification, as well as Waste Discharge Requirements and/or a Low Threat Discharge Permit covering construction activities related to discharges from hydrostatic pipeline testing and construction dewatering.

The SWRCB and RWQCBs are responsible for developing and implementing regional basin plans to regulate all pollutants or nuisance discharges that may affect either surface water or groundwater. Basin plans are prepared by the RWQCBs to establish water quality standards for both surface and groundwater bodies within their respective jurisdictions. Basin plans designate beneficial uses for surface and groundwater, set narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses, and describe implementation programs to protect all waters in the region. Under Section 303(d) of the CWA, the RWQCB develops a list of impaired water bodies in which water quality is impeding the attainment of beneficial uses.

Central Coast Basin PlanThe majority of the proposed project would be located in the mountainous Central Coast, within Regional Water Quality Control Board's Central Coast Region (Region 3), which is particularly susceptible to erosion. Therefore, the Central Coast Basin Plan focuses on controlling water quality degradation for land disturbing activities such as construction and mining (Section VIII.E). The Central Coast Basin Plan assesses the impact of erosion and sedimentation on water quality and beneficial uses in non-designated planning areas of the Central Coast, including Santa Barbara County, and contains erosion and sedimentation control policies. It identifies examples of accelerated erosion, including from construction, and the adverse effects of soil loss and sedimentation on streams and reservoirs, water supplies, groundwater recharge, fish and wildlife habitat, recreation, transport of pathogens and toxic substances, and increased flooding. The Central Coast Basin Plan also includes procedures to identify critical watersheds, assess soil-disturbing activities, and identify BMPs.

Los Angeles Region Basin Plan

The southern portion of the proposed project would be located within the Regional Water Quality Control Board's Los Angeles Region (Region 4). This portion of the project is located within the Los Angeles Basin, which shares a border with the Central Coast Basin at Rincon Point. The Ventura River Basin is a 300-square-mile drainage basin and is one of six major hydrologic units in the Los Angeles Basin. The project facilities within the Los Angeles Basin would be located in open space areas near the basin's northern border. The Los Angeles Basin Plan establishes water quality objectives and strategies to maintain water quality and beneficial uses, including storm water permitting and other nonpoint source controls, Section 401 certification, and TMDLs. The Los Angeles Basin has adopted TMDLs for the Ventura River Estuary for trash and for coastal and harbor beaches in Ventura County (LARWQCB 2013).

California Fish and Game Code Section 1602

The California Department of Fish and Wildlife (CDFW) regulates streambed alteration to conserve, protect, and manage California's fish, wildlife, and native plant resources. Section 1602 of the California Fish and Game Code requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that would substantially divert, obstruct, or change the natural flow of the bed, channel, or bank (including associated riparian vegetation) of a river, stream, or lake and/or use material from, or deposit material into, a streambed prior to commencement of the activity. Streams covered under this code include, but are not limited to, intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams, and watercourses with subsurface flow. If the CDFW determines that an action could have an adverse

effect on existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required.

California Coastal Act

The California Coastal Act of 1976 established the California Coastal Commission. The Commission, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. In general, and subject to certain exemptions, a Coastal Development Permit must be obtained from either the Commission or the local government prior to construction in the Coastal Zone. Construction for the proposed project would occur in the Santa Barbara County Coastal Zone.

4.9.2.3 Regional and Local

Santa Barbara County Floodplain Management Ordinance

Santa Barbara County's flood hazard areas are subject to periodic inundation. The County's Floodplain Management Ordinance (Ordinance No. 3898) has been adopted to protect human life and health and to minimize expenditures of public money for flood control projects, the need for rescue and relief efforts associated with flooding, prolonged business interruptions, and damage to public facilities and utilities. It has also been adopted to help maintain a stable tax base, ensure that potential buyers are notified that property is in an area of special flood hazard, and ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. Protection methods include restricting uses, requiring flood damage protection, controlling alteration of floodplains, installing stream channels and protective barriers, controlling placement of fill, and preventing floodwater diversion (Santa Barbara County 2012). The Santa Barbara County Flood Control and Water Conservation District implements this ordinance.

Santa Barbara County Grading Ordinance

The Santa Barbara County grading ordinance (County Code Chapter 14) contains standards and requirements for grading. All developers performing grading must conform to the recommendations of a soils engineer and engineering geologist, prepare and comply with an erosion and sediment control plan, comply with BMPs, employ dust control measures, use approved haul routes, prevent deposition of soil on county roads, provide drainage, protect remaining trees, and follow prescribed procedures for clearing and filling the site.

Ventura County Flood Control Ordinance

The Ventura County Watershed Protection District is responsible for the protection of life, property, waterways, watersheds, and public highways from damage or destruction caused by flooding or storm water. The District regulates channels with peak runoff flows of more than 500 cubic feet per second during a 100-year storm. The District requires a permit for any encroachment into regulated channels or their rights of way (ROWs). The District also implements the Ventura County Flood Plain Management Ordinance (Ventura County Ordinance No. 3841, as amended), which requires permit review of structures built in the floodplain. The ordinance requires construction of utilities, such as electrical, sewer, water, and gas systems in a manner designed to minimize flood damage.

Ventura County Grading Ordinance

The Ventura County grading ordinance is found in Appendix J to the Ventura County Building Code (Ordinance No. 4369). The provisions of this appendix set forth the rules and regulations to control

excavation, grading, and earthwork construction, including fills and embankments, and grading site runoff, including erosion sediments and construction-related pollutants. It also establishes the administrative procedure for the issuance of permits related to grading and provides for approval of plans and inspection of grading construction.

City of Carpinteria General Plan and Local Coastal Program

The City of Carpinteria General Plan's Open Space, Recreation, and Conservation Element contains objectives to preserve creekways and water quality and to perform restoration. The General Plan allows creek bank and bed alterations only where no practical alternatives are available and seeks to minimize water quality impacts and changes in runoff patterns. Required controls include storm water BMPs, including setbacks from creek banks (Objective OSC-6) (City of Carpinteria 2003).

City of Carpinteria Grading Ordinance

The City of Carpinteria grading ordinance is contained in the municipal code, Chapter 8.36, Excavation and Grading. The grading application contains standard conditions for grading, including engineering supervision, providing drainage, complying with municipal code, protecting public safety, protecting archaeological resources, protecting City infrastructure, minimizing fugitive dust, limiting import/export of material to off-peak hours, and complying with County Engineering Design Standards.

4.9.3 Impact Analysis

4.9.3.1 Methodology and Significance Criteria

The potential environmental impacts to hydrology and water quality from the project were evaluated using significance criteria based on the checklist items in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. An impact is considered significant if the project would:

a) Violate any water quality standards or waste discharge requirements;

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site;

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or a substantial increase in the rate or amount of surface runoff in a manner which would result in flooding on or off site;

e) Create or contribute to runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;

f) Otherwise substantially degrade water quality;

g) Place housing within a 100-year floodplain, as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; or

j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Significance criteria (g) does not apply to the proposed project because housing is not included as part of the proposed project. Therefore, the proposed project would have no impacts associated with the placement of housing within a 100-year floodplain, and this item is not applied as a criterion in the analysis of environmental impacts presented in the following section.

4.9.3.2 Applicant Proposed Measures

There are no Applicant Proposed Measures (APMs) specific to hydrology and water quality. However, APM BIO-7 and APM GEO-1 (See Table 2.10) would also apply to impacts related to Hydrology, as discussed below.

4.9.3.3 Environmental Impacts

Impact HY-1: Violate water quality standards.
LESS THAN SIGNIFICANT

Construction Impacts

Construction of the proposed project would require ground-disturbing activities such as improvements to existing access roads and development of new spur roads, structure and crane pads, and turnaround areas in steep areas with high erosion potential. Construction in these areas could increase soil erosion rates, potentially resulting in sedimentation of adjacent water bodies, violating water quality standards, and/or impacting beneficial uses. Soil disturbance and vegetation clearing adjacent to water bodies could adversely affect water quality, particularly in Rincon Creek, which is already impaired for turbidity under section 303(d) of the CWA. Construction of the proposed project could result in sedimentation of adjacent water bodies if precipitation events occur during active ground disturbing activities (e.g., grading) or if water used for construction purposes (e.g., water for dust suppression or soil compaction) runs off site.

To minimize soil erosion and potential impacts to water quality, the applicant would comply with applicable state storm water regulations and city and county grading ordinances. Since the proposed project would disturb more than 1 acre of soil, the applicant would be required to apply for coverage under the NPDES Construction General Permit and other NPDES permits, as necessary, to address construction activities such as discharge and construction dewatering. The Construction General Permit requires the development and implementation of a SWPPP, which specifies BMPs to reduce or eliminate pollutants in storm water discharges from the site during construction. The SWPPP requires implementation of site-specific BMPs to limit or eliminate sediment or other pollutant discharges from each construction activity location. APM BIO-7 provides examples of BMPs from the SWPPP that the applicant would use during construction.

Water quality could also be impacted as a result of placing fill material in drainages to facilitate improvement of existing, or construction of new, access and spur roads. However, the applicant

would be required to secure permits for any earthwork, culvert installation, or other modification to federally jurisdictional waterways (waters of the U.S.) or state waters. For impacts to waters of the U.S., the proposed project would be required to obtain a Section 404 permit from the USACE and a Section 401 permit from the SWRCB certifying that the proposed activity will comply with state water quality standards. Conditions placed on the issuance of the 401 certification become a part of the Section 404 permit issued by the USACE, and the Section 404 permit cannot be issued if Section 401 certification is denied.

In addition, the CDFW regulates activities that may substantially modify a river, stream, or lake, and requires notification of any proposed activity that will:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel; this includes ephemeral streams, desert washes, and watercourses with subsurface flow. Therefore, any impacts to ephemeral, intermittent, and/or perennial drainages within the project footprint would require a Lake and Streambed Alteration Agreement from the CDFW to comply with California Fish and Game Code Section 1602.

Finally, given that the proposed project would be located in an area with highly unstable soils and bedrock geology, the applicant would incorporate project design features to control erosion. Current project designs include a number of retaining walls, and the applicant would implement APM GEO-1 following the results of the geotechnical investigation. Implementation of APM GEO-1 would include additional erosion control devices, as well as avoidance and minimization measures, in areas with unstable slopes. These measures would reduce the potential for project construction to result in sedimentation of adjacent water bodies and minimize the potential for project construction to result in adverse impacts to water quality.

By complying with the terms and conditions of any necessary permits, and implementing site-specific BMPs, project design features, and APM GEO-1, the proposed project is not anticipated to violate water quality standards. Project construction would result in less than significant impacts to water quality.

Operation Impacts

Project operations would include patrol of the project ROW and inspection of subtransmission lines and structures and telecommunications cable. During operations, access roads, spur roads and crane pad/turnaround areas would require maintenance, which could involve periodic light grading and/or vegetation removal. If necessary, the applicant would acquire any applicable grading permits for maintenance activities, and compliance with the grading permits would ensure that water quality standards are met.

The only expected effluent from the site during operations is storm water. The proposed project would incorporate design features, BMPs, and other related measures or practices during

operations. The SWPPP would require post-construction BMPs such as stabilization and revegetation of disturbed areas, and the applicant would be required to maintain erosion and sediment control devices during operations. The applicant would identify and address areas of active slope instability throughout the proposed project during operations. No sanitary wastewater or dewatering discharges would be generated as part of project maintenance. No dredge and fill activities are anticipated as part of project maintenance.

By complying with the terms and conditions of any necessary permits, the proposed project is not anticipated to violate water quality standards or applicable waste discharge requirements. Project operations are anticipated to have less than significant impacts under this criterion.

Impact HY-2: Substantial depletion of groundwater supplies or substantial interference with groundwater recharge.

LESS THAN SIGNIFICANT

Construction Impacts

During construction, 393 acre-feet of water would be used primarily for dust control and soil compaction. Water would also be required for concrete mixing, but the applicant would use existing concrete supply facilities where feasible. The applicant would obtain all water from providers who use both surface water and groundwater. Because the proposed project would not involve direct extraction of groundwater, and water and concrete providers presumably have rights to the water they sell or use, construction of the proposed project would not substantially deplete groundwater supplies in the area.

Groundwater recharge occurs as surface water or precipitation is absorbed into soil and filters down into a groundwater aquifer (USGS 1999). For the proposed project to interfere with groundwater recharge, it would have to create impervious surfaces over an area with suitable soils for aquifer recharge or redirect surface flows away from areas with suitable soils for aquifer recharge. Construction of the proposed project would not introduce substantial new areas of impervious surfaces. New and improved roads would be created with pervious soils, and all work at the substations would take place within the existing substation footprints. The only new impervious surfaces created as a result of the proposed project would be concrete footings for new tubular steel poles (TSPs) in Segment 3B and Segment 4, and at the Getty Tap, Carpinteria Substation, and Casitas Substation. Each of the TSP foundations would be 5 to 9 feet in diameter. However, these footings would be dispersed along the length of the proposed project and would not impact groundwater recharge in any significant way. Moreover, a number of lattice steel tower foundations would be removed throughout the length of the proposed project, which would reduce the total amount of impervious surface resulting from the proposed project.

Project construction would not cause substantial depletion of groundwater supplies or substantial interference with groundwater recharge. Therefore, impacts under this criterion during project construction would be less than significant.

Operation Impacts

The proposed project would not directly extract groundwater for use during operations. During operations, water would only be used for landscaping and sanitary purposes at the three substations (Carpinteria Substation, Casitas Substation, and Santa Clara Substation). These water use activities are currently occurring at the substations and represent a small volume of water;

therefore, no change in water use is anticipated. The proposed project would not substantially deplete groundwater supplies in the area.

New areas of impervious surface would not be introduced during project operations and therefore would have no impact on groundwater recharge.

Project operations would not cause substantial depletion of groundwater supplies or substantial interference with groundwater recharge. Therefore, this impact is less than significant for project operation.

Impact HY-3: Substantial alteration of the existing drainage pattern of the site or area that results in substantial erosion or siltation on- or off-site.
LESS THAN SIGNIFICANT

Construction Impacts

Based on a wetland delineation and preliminary jurisdictional determination conducted for the proposed project, construction would result in impacts to 15 ephemeral drainages (BioResource Consultants 2013, SCE 2012). Of the 15 ephemeral drainages impacted, 12 would be impacted as a result of improving existing access roads, one as a result of the use of staging sites, one as a result of creating a new access road, and one as a result of creating a new spur road, all along Segment 4. As currently designed (based on 60 percent engineering drawings), construction of the proposed project would result in a total of 0.06 acres of impacts to waters of the U.S. and 0.50 acres of impacts to state waters (BioResource Consultants 2013). Prior to commencement of construction, the proposed project would be required to secure permits from the USACE and SWRCB to comply with sections 404 and 401 of the CWA, and the proposed project would be required to secure a Lake and Streambed Alternation Agreement from the CDFW to comply with Section 1602 of the California Fish and Game Code. Each of these permits would include required measures to avoid, minimize, or mitigate erosion and sedimentation of these features.

The proposed project would use existing drainage facilities, upgrade or replace deteriorated drainage facilities during rehabilitation of access roads, and design new spur roads so they do not alter existing drainage patterns. Structure pads and laydown/work areas could result in minor localized changes in runoff. However, the sites would be graded such that water would run toward the direction of natural drainage. The applicant would also be required to implement a SWPPP with erosion and sediment control devices to comply with the NPDES Construction General Permit.

As a result of implementing project design features and BMPs, and complying with all applicable laws and permit requirements, the proposed project would not substantially alter the existing drainage pattern of the site that would result in substantial erosion or siltation on or off site. Therefore, impacts under this criterion would be less than significant.

Operation Impacts

Project operations would include patrol of the project ROW and inspection of subtransmission lines and structures and telecommunications cable. During operations, access roads, spur roads, and crane pad/turnaround areas would require maintenance, which may involve periodic light grading and/or vegetation removal. If necessary, the applicant would acquire any applicable grading permits for maintenance activities. Compliance with the grading permits would ensure that measures are in place to reduce or eliminate the potential for erosion or siltation on or off site.

The proposed project's operations would not alter drainage patterns, including the course of any stream or river. Storm water runoff would use existing drainage facilities. Where permits are required for maintenance or repair activities in waters of the U.S. or state waters, all activities would be conducted in accordance with applicable federal and/or state permits.

Operation of the proposed project would not alter the existing drainage pattern of a stream, river, site, or area and would not result in substantial erosion or siltation on or off site. Therefore, impacts under this criterion would be less than significant.

Impact HY-4: Substantial alteration of the existing drainage pattern or rate or amount of surface runoff in a manner which would result in flooding.
LESS THAN SIGNIFICANT

Construction Impacts

The proposed project would use existing drainage facilities, upgrade or replace deteriorated drainage facilities during rehabilitation of access roads, and design new spur roads so they do not alter existing drainage patterns. Structure pads and laydown/work areas could result in minor localized changes in runoff. However, the sites would be graded such that water would run toward the direction of natural drainage. Although construction pads would result in minor localized changes in runoff volumes, the proposed project would not result in a substantial increase in the amount of impervious surface. In addition, the proposed project would comply with Ventura and Santa Barbara County flood control ordinance and, if necessary, obtain permits for encroachment on any channel ROWs regulated by the Ventura County Watershed Protection District.

The proposed project would also incorporate design features to control runoff rates and incorporate SWPPP BMPs to minimize erosion that could cause sedimentation and loss of receiving water capacity. Additionally, compliance with applicable laws and permit conditions would ensure that the applicant would conduct any dredge and fill activities such that receiving water capacity would not be reduced. Therefore, impacts under this criterion resulting from project construction would be less than significant.

Operation Impacts

Project operations would not alter drainage patterns and would not introduce substantial amounts of new impervious surfaces. Storm water runoff would follow existing drainage patterns, and the proposed project would incorporate design features to control runoff rates to minimize any impacts to flooding. The applicant would implement its existing operational storm water management plan and BMPs to reduce the potential for flooding and minimize runoff velocities. Therefore, the proposed project would not substantially alter existing drainage patterns, and any potential impacts associated with surface runoff and flood risk would be less than significant.

Impact HY-5: Create or contribute to runoff water exceeding the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff.
LESS THAN SIGNIFICANT

Construction Impacts

Project construction would generate storm water runoff and runoff from dust control activities. However, the proposed project would not substantially alter the existing drainage patterns of the

site. Existing drainage facilities would be used, upgraded, or replaced. New access roads and subtransmission structure pads would be constructed such that the natural drainage direction is maintained, and runoff velocity dissipation devices such as water bars would be employed to control the rate at which runoff enters drainage systems. Construction of the proposed project would not result in a substantial increase in the amount of impervious surfaces, and runoff volumes are anticipated to be roughly the same as current conditions.

The proposed project would also be required to comply with all applicable county and city grading and flood control ordinances, which would require project designs to be reviewed and approved prior to construction. To be approved, the plans would have to demonstrate that the existing and planned storm water drainage systems are capable of receiving the anticipated runoff volumes from the proposed project. In addition, the proposed project would be required to implement BMPs as part of the SWPPP to reduce the potential for polluted runoff leaving the site. Therefore, impacts under this criterion would be less than significant.

Operation Impacts

Runoff generated during project operations would be limited to storm water, which would follow existing and upgraded drainage systems that have been designed to accept the anticipated runoff capacity. The proposed project would also be required to implement Spill Pollution Control and Countermeasures (SPCC) plans for the substations that include provisions for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines. Implementation of the SPCC plans would support the avoidance or minimization of polluted runoff during operation. Any impacts under this criterion from project operations would be less than significant.

Impact HY-6: Other substantial degradation of water quality.

LESS THAN SIGNIFICANT

Construction Impacts

During construction of the proposed project, potential contaminants could be released, including oil, gasoline, diesel motor fuel, industrial solvents, and other chemicals necessary for project construction. However, as discussed above, the applicant would be required to implement a SWPPP that includes BMPs to reduce or prevent any construction-related pollutants from contaminating runoff and degrading water quality on or off site. In addition to BMPs related to erosion control devices, the SWPPP would also include BMPs to address activities that could indirectly contribute contaminants to surface water runoff from the site. APM BIO-7 provides example BMPs that the applicant would employ.

With implementation of the SWPPP, and compliance with all applicable laws and permits, impacts from project construction under this criterion would be less than significant.

Operation Impacts

Operation of the proposed project is not expected to result in the release of pollutants that could degrade water quality. Implementation of the SWPPP and the SPCC plans would reduce the potential for impacts on water quality associated with operations to less than significant.

Impact HY-7: Project structures would impede or redirect flood flows within a 100-year flood hazard area.
LESS THAN SIGNIFICANT

Construction Impacts

In the immediate vicinity of the Carpinteria Substation, two TSPs would be installed within a 100-year flood hazard area as mapped by FEMA. The foundations of these structures would be designed to withstand flood flows. Given the circular shape of the above ground portion of the foundations and their small diameter (5–9 feet), these structures would not impede or redirect flood flows. A small portion of the northwest corner of the Carpinteria Substation is also located within a 100-year flood hazard area, but this is an existing structure and the area within the flood hazard zone is not of sufficient size to impede or redirect flood flows. No other project components would be located within a 100-year flood hazard area. Therefore, any potential construction impacts under this criterion would be less than significant.

Operation Impacts

In the immediate vicinity of the Carpinteria Substation, two TSPs would be installed within the 100-year flood zone as mapped by FEMA. These structures are not anticipated to impede or redirect flood flows because of their size and shape. In addition, the proposed project would result in the replacement of lattice steel poles with TSPs in the immediate vicinity of the Carpinteria Substation. TSPs are less likely to catch and retain debris during a flood event than lattice steel poles and less likely to result in an impediment to or redirection of flood flows. Therefore, any potential operation impacts would be less than significant.

Impact HY-8: Risk of loss, injury or death involving flooding.
LESS THAN SIGNIFICANT

Construction Impacts

Only the Carpinteria and Casitas Substations are located near FEMA-designated 100-year flood hazard zones. The Casitas Substation is located downstream of the Lake Casitas Reservoir Dam, the Matilija Reservoir Dam, and the Los Robles Diversion Dam. This substation, however, is located outside of, and at an elevation approximately 20 feet higher than, the Ventura River floodplain. Construction in Segment 4, near the Carpinteria Substation would be conducted during the dry season, to the extent possible. Therefore, workers would not be exposed to the potential of loss, injury or death involving flooding. Impacts under this criterion would be less than significant.

Operation Impacts

Only the Carpinteria and Casitas Substations are located near FEMA-designated 100-year flood hazard zones. The subtransmission infrastructure is un-staffed and would continue to be so during project operations. Therefore, workers would not be exposed to the potential of loss, injury, or death involving flooding. In addition, the proposed project would result in the replacement of lattice steel poles with TSPs in the immediate vicinity of the Carpinteria Substation. TSPs are less likely to catch and retain debris during a flood event than lattice steel poles and less likely to result in an impediment to or redirection of flood flows. Impacts under this criterion during operation would be less than significant.

Impact HY-9: Risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

LESS THAN SIGNIFICANT

A seiche is a standing wave of water on a river, lake, pond, gulf, or bay caused by an earthquake. A tsunami, or tidal wave, is a wave of water on the ocean caused by an undersea earthquake.

Construction Impacts

The proposed project is not located near enough to any water body that could generate a seiche in the event of an earthquake for any project workers or infrastructure to be at risk of loss, injury, or death. In addition, the proposed project would be constructed in mountainous areas high above sea level. These locations are well outside of mapped tsunami inundation areas (CDC 2009a, 2009b, 2009c, and 2009d). Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury, or death by seiche or tsunami.

A mudflow is a downhill movement of soft, wet earth and debris caused by a rapid and heavy accumulation of rain or snowmelt in areas subject to potential for landslides. As discussed in Section 4.6, "Geology, Soils, and Mineral Resources," the proposed project would be located within areas of earthquake-induced landslide potential. The applicant would employ APM GEO-1, which involves the completion of geotechnical studies prior to construction and would employ measures recommended in the geotechnical studies during construction to address potential impacts related to geological instability. Project components would meet applicable state seismic safety standards, including special foundation design, additional bracing, and structure support. The proposed project would not involve the development of structures or facilities designed for human occupation, and construction activities would take place during the dry season, to the extent feasible. Therefore, any potential impacts would be less than significant.

Operation Impacts

The proposed project would not be located near enough to any water body that could generate a seiche in the event of an earthquake and is well outside of mapped tsunami inundation areas. Project components and structures would be sited in areas susceptible to mudflow, but the applicant would implement project design features such as retaining walls that would reduce the potential for infrastructure to be impacted by a mudflow during operations. The applicant would conduct periodic maintenance patrols during operations to identify and address areas of active slope instability. Therefore, impacts under this criterion during operations would be less than significant.

4.9.4 Mitigation Measures

There are no MMs specific to hydrology and water quality.

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4.10 Land Use and Planning

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to land use and planning. Land use and relevant local and regional plans are addressed in this section as well as in Sections 4.2, "Agriculture and Forestry Resources," 4.4, "Biological Resources," 4.15, "Transportation and Traffic," Section 4.1 "Aesthetics," and Section 4.14, "Recreation."

4.10.1 Environmental Setting

For the purposes of evaluating land use and planning impacts in the project component areas, the proposed project will be referred to in this subsection by the project components as described in Chapter 2, "Project Description."

The proposed project components are generally located in the Transverse Mountains of southern California, with portions of Segment 4 crossing the Los Padres National Forest and portions of Segment 2 crossing land managed by the Bureau of Reclamation. The project would cross portions of unincorporated Ventura County, including the Ojai Valley planning area; Santa Barbara County, and the City of Ventura. The proposed project would cross land with a variety of uses, including rural, industrial, agricultural, residential, open space, recreation, and major roads and highways.

4.10.1.1 Land Use in the Project Area

Parks and Trails

Parks and trails in the vicinity of the proposed project components are shown in Figure 4.10-1. The majority of the proposed project would cross open space/vacant lands on private land. Foster Park, located approximately 0.3 miles south of the Casitas Substation, offers camping and picnic areas and hiking opportunities (Ventura County n.d.). Segment 3A would cross the entrance to Lions Park, a small community park in unincorporated Santa Barbara County along Casitas Pass Road, and El Carro Park, a small community park located on Foothill Road in the City of Carpinteria. Segment 2 would cross the Ojai Valley Trail, and Segment 4 would cross the Franklin Trail (see Section 4.14 "Recreation" for more information).

Highways

Segment 2 would cross State Route (SR) 33 near the Casitas Substation. Segment 3B would cross SR 150 near the Ventura-Santa Barbra County line, and Segment 4 would cross and parallel portions of SR 150 in Ventura County. Segment 3A would parallel portions of SR 192 from the county line to the Carpinteria Substation.

Airports

Table 4.10-1 lists the airports in Ventura and Santa Barbara Counties, their locations, their operating status, and their distance from the closest project component. Eight public use and two military airport facilities are located in Ventura and Santa Barbara Counties (Ventura County 2000; Santa Barbara County 1993). The closest airport to the proposed project area is Oxnard Airport, located approximately 6.9 miles from the Santa Clara Substation. With the exception of Naval Base Ventura County Point Mugu and Vanderberg Air Force Base, all airports are open to the public.

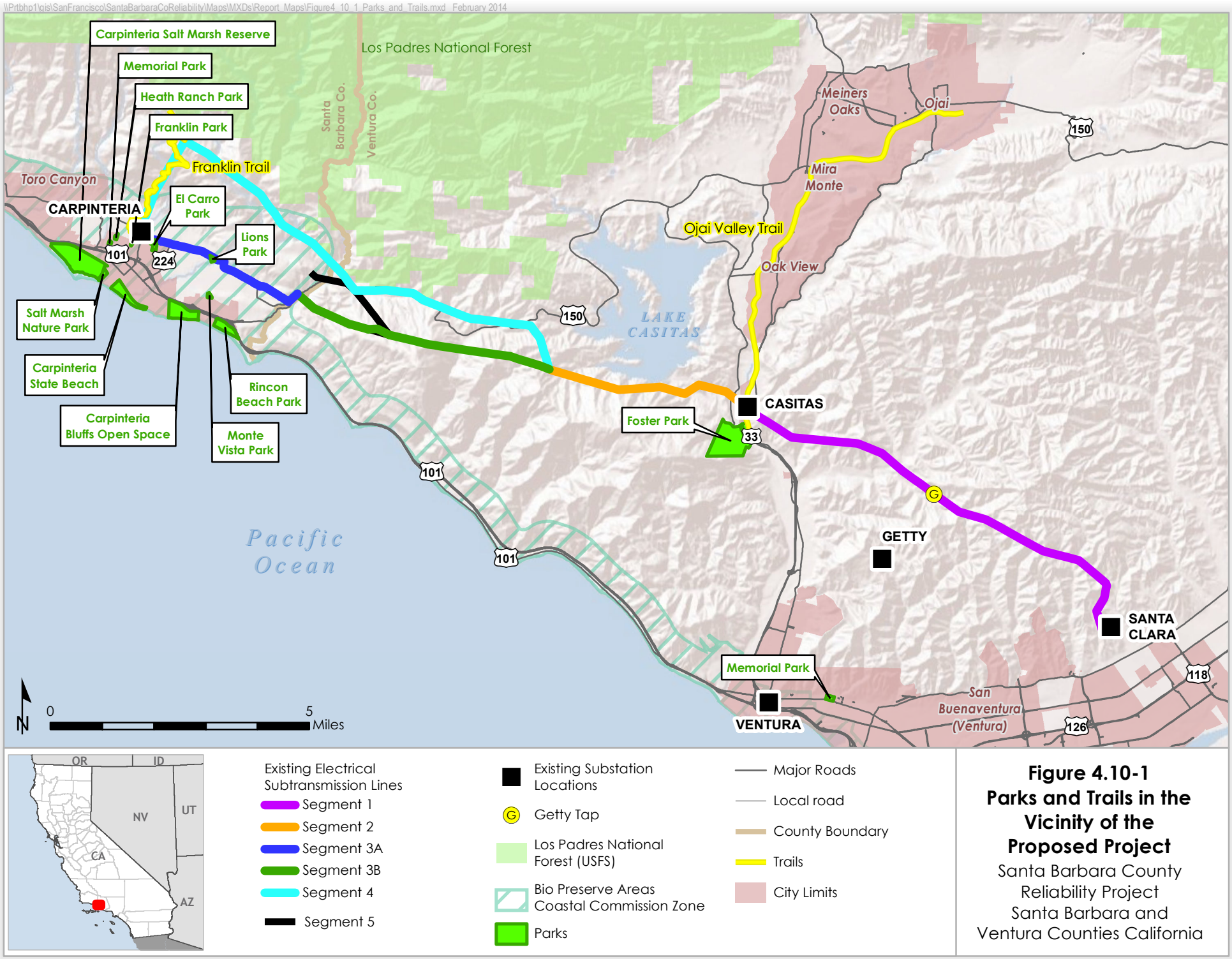

Figure 4.10-1
Parks and Trails in the Vicinity of the Proposed Project
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

Table 4.10-1 Airports in Ventura and Santa Barbara Counties

Airport	Location	Operating Status	Distance from Project Component
Oxnard Airport	Ventura County	Operational	6.9 miles from Santa Clara Substation
Camarillo Airport	Ventura County	Operational	7.9 miles from Santa Clara Substation
Santa Paula Airport	Ventura County	Operational	7.1 miles from Santa Clara Substation
Naval Base Ventura County Point Mugu	Ventura County	Operational	13.2 miles from Santa Clara Substation
Santa Barbara Municipal Airport	Santa Barbara County	Operational	17.1 miles from Carpinteria Substation
Santa Ynez Valley Airport	Santa Barbara County	Operational	33.0 miles from Carpinteria Substation
Vanderberg Air Force Base	Santa Barbara County	Operational	61.9 miles from Carpinteria Substation
Santa Maria Public Airport	Santa Barbara County	Operational	60.7 miles from Carpinteria Substation
Lompoc Airport	Santa Barbara County	Operational	54.3 miles from Carpinteria Substation
New Cuyama Airport	Santa Barbara County	Operational	35.8 miles from Segment 4

Sources: Ventura County 2000; Santa Barbara County 1993

Land Use in the Proposed Project Area

The following subsections describe the existing land uses within and adjacent to the proposed project components, as well as applicable general plan land use and current zoning. Proposed project components include Segments 1, 2, 3A, 3B, and 4; Santa Clara Substation; Casitas Substation; Carpinteria Substation; and Getty Tap. Figure 4.10-2 shows general plan land use, and Figure 4.10-3 shows zoning in the proposed project component areas.

Segment 1 begins at the Santa Clara Substation, near the City of Ventura, and continues west for approximately 9.0 miles before terminating at the Casitas Substation. Land uses crossed by or adjacent to Segment 1 include vacant/undeveloped open space and industrial (i.e., oil and gas wells). Residential areas comprising low-density single-family detached houses are located north and south of this segment near the Casitas Substation to the east. Foster Park would be located approximately 0.33 miles south of where Segment 1 enters the Casitas Substation.

Segment 2 begins at the Casitas Substation, south of Lake Casitas, and continues west for approximately 4.1 miles. The majority of the land uses crossed by or adjacent to Segment 2 consist of vacant/ undeveloped open space. Portions of Segment 2 would cross within approximately 300 feet of the southern shore of Lake Casitas. Segment 2 would also cross the Ojai Valley Trail, which parallels SR 33 and the Ventura River.

Segment 3A begins at the Carpinteria Substation and continues east for approximately 3.7 miles to the Ventura County line. The eastern portion of this segment consists primarily of orchards, with large-lot single-family residences interspersed throughout. Farther west and along SR 192, orchards give way to commercial nurseries and single-family residential subdivisions. Other land uses, including Lions Park and El Carro Park, are located adjacent to Segment 3A along SR 192.

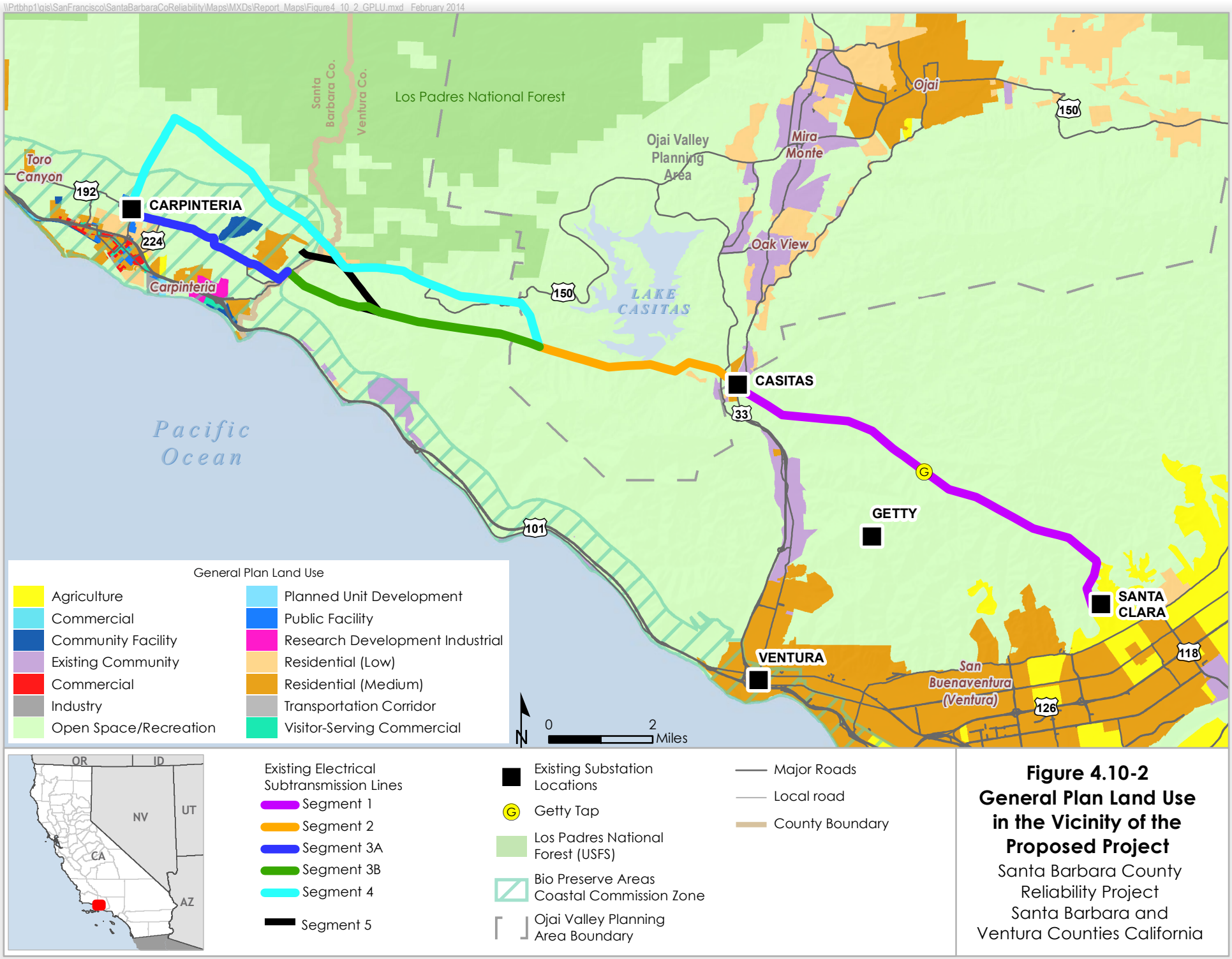

Figure 4.10-2
General Plan Land Use in the Vicinity of the Proposed Project
Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

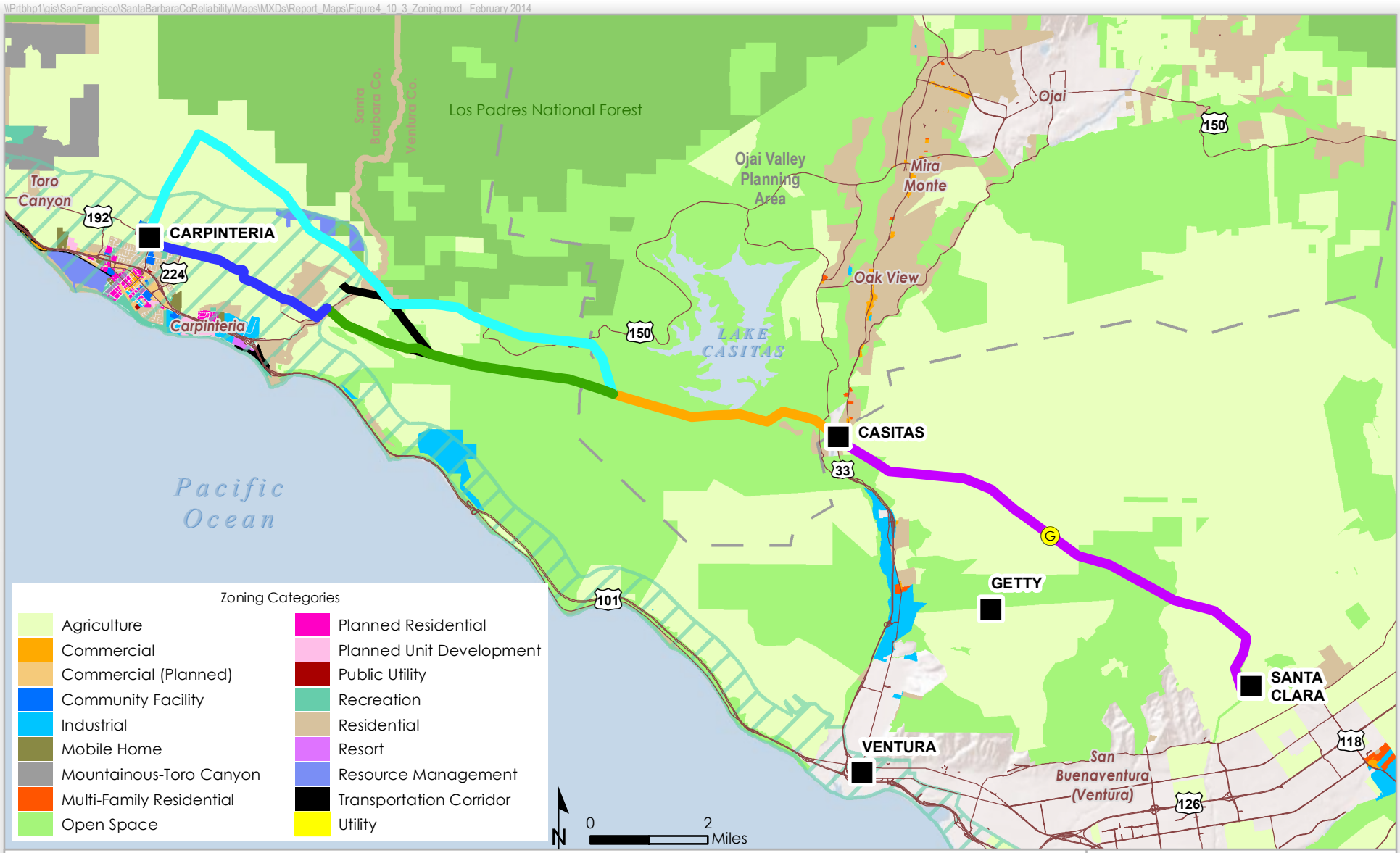

Figure 4.10-3
Zoning Designations in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

Segment 3B begins near the Ventura County and Santa Barbara County line and continues west for approximately 5.2 miles. The western portion of this segment consists primarily of orchards, with large-lot single family residences interspersed throughout. The eastern portion is primarily vacant/undeveloped open space.

Segment 4 begins where Segment 2 and Segment 3B meet in Ventura County and continues west for approximately 10.8 miles before terminating at the Carpinteria Substation. Land uses crossed by or adjacent to Segment 4 include vacant/undeveloped open space; single-family detached residential areas along SR 150; agriculture (i.e., orchards and commercial nurseries); and Carpinteria High School.

The Getty Tap is located in Ventura County approximately in the middle of Segment 1, on vacant/ undeveloped open space. Portions of the 66-kilovolt (kV) subtransmission lines not collocated with the segments previously mentioned would cross land with similar uses, including orchards, large-lot single-family residences, and vacant/undeveloped open space.

The Santa Clara Substation is located in Ventura County, west of the City of Ventura, on land surrounded by vacant/undeveloped open space and orchards. The nearest residential subdivision is located approximately 0.9 miles west of the substation. The Casitas Substation is also located in Ventura County along SR 33 and is primarily surrounded by single-family detached residences and open space. The Carpinteria Substation is located in the City of Carpinteria, adjacent to Carpinteria High School to the west, commercial nurseries to the north and east, and single-family residential areas to the south across Foothill Road.

Table 4.10-2 identifies each of the proposed project components, the jurisdiction in which it is located, the planned land use, existing land use, and zoning.

Table 4.10-2 Land Use Designations for Project Components

Project Components	Jurisdiction (Community)	General Plan Land Use	Existing Land Use	Zoning
Segment 1	Ventura County	Open Space Existing Community Urban	Vacant/Undeveloped Open Space Agriculture	OS-160 ac AE-40 ac OS-40 ac R1-10,000 square feet RE-1 ac RE-2 ac AE 40 ac/SRP
Segment 2	Ventura County	Open Space Existing Community Urban	Vacant/Undeveloped Open Space Agriculture	OS 40 ac/SRP OS-80 ac/SRP OS-80 ac
	City of Ventura	NA	Vacant/Undeveloped Open Space Recreation	R1-1ac

Table 4.10-2 Land Use Designations for Project Components

Project Components	Jurisdiction (Community)	General Plan Land Use	Existing Land Use	Zoning
Segment 3A	Santa Barbara County	Open Land Residential	Agriculture Transportation Residential Recreation	AG-1-10 3-E-1 REC
	City of Carpinteria	Open Space/ Recreation Public Facilities Low Density Residential	Utility Transportation Residential Agriculture Recreation Education	UT 7-R-1 CF 8-R-1 PRD4 PUD-5 REC
Segment 3B	Ventura County	Open Space	Vacant/Undeveloped Open Space Agriculture	AE-40 ac OS-40 ac OS-20 ac OS-160 ac
	Santa Barbara County	Open Land Uses	Agriculture	AG-I-10
Segment 4	Ventura County	Open Space Rural 5 Acre Minimum	Vacant/Undeveloped Open Space Agriculture Residential	OS 160 ac OS-40 ac AE-40 ac RA-5 ac
	Santa Barbara County	Open Land Uses	Agriculture	RES-100 AG-I-40 AG-I-10 A-I-X-O
	City of Carpinteria	Public Facility	Education Utility	CF UT
Getty Tap	Ventura County	Open Space	Vacant/Undeveloped Open Space	AE-40 ac
Santa Clara Substation	Ventura County	Open Space	Utility Vacant/Undeveloped Open Space	OS-160 ac
Casitas Substation	Ventura County	Existing Community	Utility Residential Open Space	RE-1 ac OS-40 ac
	City of Ventura	NA	Utility Open Space	R-1-1AC
Carpinteria Substation	City of Carpinteria	Public Facility	Utility Education Agriculture Residential	UT

Key:
ac Acres
AE Agricultural Exclusive
CF Community Facility District
3-E-1 Single-Family Residential, minimum 3-acre lot
8-R-1 Single-Family Residential, minimum 8,000 square foot lot
7-R-1 Single-Family Residential, minimum 7,000 square foot lot
NA Not Applicable
OS Open Space
R1 Single Family Residential
RA Rural Agricultural

Table 4.10-2 Land Use Designations for Project Components

Project Components	Jurisdiction (Community)	General Plan Land Use	Existing Land Use	Zoning

RE-1 Rural Exclusive, minimum 1-acre lot
RE-2 Rural Exclusive, minimum 2-acre lot
RES Resource Management
REC Recreation District
PRD Planned Residential Development
PUD Planned Unit Development
SRP Scenic Resource Protection
UT Utility

4.10.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern land use and planning in the project area.

4.10.2.1 Federal

Code of Federal Regulations, Title 14, Part 77

Under the Code of Federal Regulations, Title 14, Part 77, which lists Federal Aviation Administration Regulations, the applicant would be required to obtain a Hazard/No Hazard determination for any project structures taller than 200 feet, or construction or modification of structures that exceed an imaginary surface surrounding a runway. This requirement is discussed in Section 4.8 "Hazards and Hazardous Materials."

Coastal Zone Management Act

Proposed project components would be located within Santa Barbara County's coastal zone. The Coastal Zone Management Act of 1972 (16 United States Code1451 et seq., as amended) provides assistance to states, in cooperation with federal and local agencies, for developing land and water use programs in coastal zones. California has developed and implemented a federally approved coastal management program describing current coastal legislation and enforceable policies. In some instances, coastal counties and cities have developed coastal management programs that are certified by the California Coastal Commission. Santa Barbara County currently has a certified coastal zoning ordinance that regulates all development activities within the coastal zone (Santa Barbara County 2014).

Los Padres National Forest

As noted above, portions of Segment 4 would cross the Los Padres National Forest. The Los Padres National Forest Land Management Plan divides the national forest into land use zones that identify specific management strategies for each area. These land use zones are the primary management tools used by the national forest to implement the strategies contained in the land management plan. Segment 4 would cross the Back Country (Motorized Use Restricted) land use zone, which allows major utility corridors in designated areas. Within this zone, motorized use is restricted to administrative uses or authorized special uses. The intent of this zone is to maintain the natural character of the landscape (USFS 2005).

In addition to land use zones, the land management plan has further divided the Los Padres National Forest into places, which are geographical units with similar landscapes. Segment 4 would

cross the place known as the Santa Barbara Front area. This area provides various day-use recreation opportunities and provides a scenic backdrop for the nearby communities, including the city of Carpinteria. The primary objectives for this area include maintaining the natural appearance of the landscape, continuing various recreation opportunities, improving access, and protecting sensitive species habitat (USFS 2005).

Bureau of Reclamation

As noted above, portions of Segment 2 would cross land managed by the Bureau of Reclamation (BOR). The applicant's current BOR permit grants SCE the following:

> …permanent and exclusive easements and rights-of-way to construct, reconstruct, maintain, operate, enlarge, improve, remove, relocate, repair and renew, at any time and from time to time, electric transmission and telephone lines consisting of one or more lines of steel towers, poles, and/or other structures, wires, cables, including groundwires, both overhead and underground, and communication circuits, with necessary and convenient foundations, guy wires and anchors, insulators and cross-arms placed on said structures, and other appurtenances connected therewith, convenient and necessary for the construction, maintenance, operation, regulation, control and grounding of electric transmission and telephone lines for the purpose of transmitting, distributing, regulating, using and controlling electric energy…

As a result, the proposed upgrades are an allowable activity within the applicant's BOR ROW, and BOR land is not discussed further in the analysis.

4.10.2.2 State

California Public Utilities Commission (CPUC)

The CPUC's review of transmission line applications takes place under two concurrent and parallel processes:

1. Environmental review pursuant to the California Environmental Quality Act (CEQA); and
2. Review of project needs and costs pursuant to Public Utilities Code Sections 1001 et seq. and General Order 131-D.

CPUC General Order 131-D, rules relating to the planning and construction of electric generation, transmission/power/distribution line facilities, and substations located in California, states that no electric public utilities will begin construction in the State of California of any new electric generating plant, or of the modification, alteration, or addition to an existing electric generating plant, or of electric transmission/power/distribution line facilities, or of new, upgraded, or modified substations without first complying with the provisions of the General Order. For the purposes of the General Order, a transmission line is designated to operate at or above 200 kV. A power line is designated to operate between 50 and 200 kV. A distribution line is designated to operate under 50 kV.

Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with the regulation of investor-owned public utilities. Article XII, Section 8, of the California Constitution states, "[a] city, county, or other public body may not regulate matters over which the Legislature grants regulatory power to the [Public Utilities] Commission." The Public Utilities Code authorizes

the CPUC to "do all things, whether specifically designated in this act or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction" (California Public Utilities Code §701). Other Public Utilities Code provisions generally authorize the CPUC to modify facilities, secure adequate service or facilities, and operate so as to promote health and safety.

In the context of electric utility projects, CPUC General Order 131-D, Section XIV.B, states that "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 Commission's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." The applicant and Southern California Edison (SCE) would be required to obtain all applicable ministerial building and encroachment permits from local jurisdictions for the proposed project (see Table 2-9 in Chapter 2, "Project Description"). The applicant and CPUC have conducted outreach and consultation with local planning and public works agencies in Ventura County, Santa Barbara County, and the City of Carpinteria over the course of the preparation of this Environmental Impact Report.

State Scenic Highways

The California Department of Transportation (Caltrans) administers the State Scenic Highway Program to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways (California Streets and Highways Code Sections 260 et seq.). The State Scenic Highway Program includes a list of highways that are either eligible for designation as scenic highways or have been so designated. The program entails the regulation of land use and density of development, attention to the design of sites and structures, and attention to and control of signage, landscaping, grading, and the undergrounding of utility lines within the view corridor of designated scenic roadways. The local jurisdiction is responsible for adopting and implementing such regulations. Caltrans has determined that SR 150 and SR 33, which are located in the proposed project area, are eligible State Scenic Highways (Caltrans 2012). If a highway is listed as eligible for official designation, it is part of the State Scenic Highway Program and care must be taken to preserve its eligible status.

4.10.2.3 Regional and Local

Private lands crossed by the proposed project are under the jurisdiction of Ventura County, the City of Ventura, Santa Barbara County, and the City of Carpinteria. The following subsections provide an overview of the plans, policies, and regulations that pertain to the proposed project.

Ventura County General Plan

Ventura County updated the Ventura County General Plan in 2011 to guide future development and protect sensitive resources in accordance with state law. The general plan is divided into several resources, including land use. The Land Use Element contains goals and policies that provide for the orderly growth and development of the county. The goals and policies provide the basis for all decisions related to land use. The following land use goals and policies are applicable to the proposed project. In addition, the Public Facilities and Services Element includes the following applicable goals and policies (Ventura County 2011a):

- ***Land Use Goal 4:*** *Ensure that land uses are appropriate and compatible with each other, and guide development in a pattern that will minimize land use conflicts between adjacent land uses.*

- ***Land Use Policy 3:*** *Any land use shall be deemed consistent with the General Plan if it is permitted under a zoning designation… and if the land use does not conflict with any other policy of the County General Plan.*
- ***Public Facilities and Services Policy 1:*** *New gas, electric, cable television and telephone utility transmission lines shall use or parallel existing utility rights-of-way where feasible and avoid scenic areas when not in conflict with the rules and regulations of the California Public Utilities Commission. When such areas cannot be avoided, transmission lines should be designed and located in a manner to minimize their visual impact.*
- ***Public Facilities and Services Policy 2:*** *All transmission lines should be located and constructed in a manner which minimizes disruption of natural vegetation and agricultural activities and avoids unnecessary grading of slopes when not in conflict with the rules and regulations of the California Public Utilities Commission.*

The proposed project would cross lands designated as Open Space, Existing Community, and Urban. According to the Land Use Element of the Ventura County General Plan, compatible uses within the Open Space land use classification include a variety of agricultural, recreational, and mineral extraction uses. Compatible uses within the Existing Community and Urban classifications include residential, commercial, and industrial uses (Ventura County 2011a).

Ojai Valley Area Plan

The proposed project would also cross the Ojai Valley planning area within Ventura County. In 1995, Ventura County approved, and in 2008 amended, the Ojai Valley Area Plan to provide specific guidance and direction for future development within the planning area. Similar to the general plan, the Land Use Element contains goals and polices that provide for the orderly growth and development of the area. The following land use policy is applicable to the proposed project (Ventura County 2008):

- ***Land Use Policy 3:*** *All discretionary development projects shall be reviewed and conditioned to ensure that they are compatible with their surroundings, are of high quality and good design, are consistent with the character of the Ojai Valley, and are beneficial to the community as a whole.*

The Project would cross portions of the Ojai Valley planning area designated as Open Space. According to the Land Use Element of the Ojai Valley Area Plan, compatible uses within the Open Space land use classification include low density residential, public open space acquired through easement or other means, and preservation of agricultural lands. Open Space areas are intended to act like urban growth boundaries around existing communities (Ventura County 2008).

Ventura County Non-coastal Zoning Ordinance

Table 4.10-2, above, summarizes the zones that would be crossed by the proposed project in Ventura County. Section 8105-4 of the Ventura County Non-coastal Zoning Ordinance states that transmission lines are permitted as a conditional use in all zones crossed by the proposed project with approval of the planning director (Ventura County 2011b). However, the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of public utilities in the State of California; therefore, no local discretionary permits would be required (Subsection 4.10.2.2, “State”).

City of Ventura General Plan

The City of Ventura's general plan, entitled Achieving the Vision 2005 Ventura General Plan, was adopted to improve the overall quality within the city (City of Ventura 2005). The proposed project would cross a City-owned parcel that does not have a land use designation. This area is undeveloped and is bisected by the Ventura River and the Ojai Valley Trail. The general plan emphasizes the importance of improving recreation opportunities and preserving natural open spaces within the city; however, no goals or policies pertaining to land use were identified that would apply to the proposed project (City of Ventura 2005).

City of Ventura Zoning Ordinance

The proposed project would cross the R-1-1AC zone. The zoning ordinance does not state whether transmission lines are permitted, conditionally permitted, or not permitted in this zone. Regardless, the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of public utilities in the State of California; therefore, no local discretionary permits would be required (Subsection 4.10.2.2, "State").

Santa Barbara County General Plan Land Use Element

The Santa Barbara County General Plan Land Use Element was adopted in 1980 and amended in 2011 to ensure the appropriate and orderly development of the county. To achieve this, the Land Use Element contains goals and policies, the following of which are applicable to the proposed project (Santa Barbara County 2011a):

- *Preservation of open lands shall be encouraged under the Williamson Act.*
- *Utilization of open lands shall be consistent with protection and long-term productivity of County watersheds.*

In addition to the general goals previously mentioned, the Land Use Element includes the following specific goals for the Carpinteria area (Santa Barbara County 2011a):

- *Every effort should be made to preserve fertile lands for agriculture.*
- *Existing agriculture should be preserved above Foothill Road and east and above Casitas Pass Road. Lands with prime soils located below Foothill should also remain in agriculture use.*

According to the Land Use Element of the Santa Barbara County General Plan, compatible uses within the Open Land Uses classification include various types of agriculture, including livestock operations, and public utility uses that are compatible with agriculture. Residential areas are intended to provide for varying densities of single- and multi-family developments (Santa Barbara County 2011a).

Santa Barbara County Coastal Land Use Plan

Portions of Segment 3A and Segment 4 would be located in the Santa Barbara County Coastal Zone. The Santa Barbara County Coastal Land Use Plan (an element of the general plan) contains the following policies that are applicable to the proposed project (Santa Barbara County 2009):

- ***Policy 3-9:*** *Water, gas, sewer, electrical, or crude oil transmission and distribution lines which cross fault lines, shall be subject to additional safety standards, including emergency shutoff where applicable.*
- ***Policy 6-20:*** *Transmission line rights-of-way shall be routed to minimize impacts on the viewshed in the coastal zone, especially in scenic rural areas, and to avoid locations which are on or near habitat, recreational, or archaeological resources, whenever feasible. Scarring, grading, or other vegetative removal shall be repaired, and the affected areas revegetated with plants similar to those in the area to the extent safety and economic considerations allow.*

Santa Barbara County Land Use and Development Code

Table 4.10-2 summarizes the zones that would be crossed by the proposed project in Santa Barbara County. Section 35 of the Santa Barbara County Land Use and Development Code states that transmission lines are permitted as a conditional use in all zones crossed by the proposed project with the approval of a Conditional Use Permit. However, the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of public utilities in the State of California; therefore, no local discretionary permits would be required (Santa Barbara County 2011b, Subsection 4.10.2.2, "State").

Santa Barbara County Article II Coastal Zoning Ordinance

Table 4.10-2 summarizes the zones that would be crossed by the proposed project in Santa Barbara County. Section 35-147 of the Santa Barbara County Article II Coastal Zoning Ordinance states that transmission lines are subject to a Major Conditional Use Permit and Coastal Development Permit (Santa Barbara County 2012). The CPUC has preemptive jurisdiction over the construction, maintenance, and operation of public utilities in the State of California; therefore, no local discretionary permits would be required (Subsection 4.10.2.2, "State"). However, because the Coastal Development Permit would be issued by the County on behalf of the California Coastal Commission, this discretionary permit is required prior to construction within the Coastal Zone.

Santa Barbara County Grading Code

The Santa Barbara County Grading Code requires that any land disturbing activities in the unincorporated portions of the county obtain a pollution, sediment, and erosion control permit if the activity (Santa Barbara County 2010):

- Exceeds 50 cubic yards of fill;
- Includes cut and fill that exceeds 3 feet of the natural contours;
- Changes the natural contours within a watercourse;
- Disturbs 1 acre or more of non-agricultural land;
- Disturbs 5,000 feet or more of non-agricultural land on slopes greater than 30 percent; or
- Disturbs 5,000 feet near any storm drain conveyance system.

City of Carpinteria General Plan and Local Coastal Program

The City of Carpinteria General Plan and Local Coastal Program was adopted in 2003 to maintain the high quality of life and rural character of the city. The Land Use Element identifies the desired

future land uses and guides growth and development through the implementation of various goals and policies. The following policy applies to the proposed project (City of Carpinteria 2003):

- ***LU-1d –*** *Ensure that the type, location and intensity of land uses planned adjacent to any parcel designated open space/recreation or agriculture are compatible with these public resources and will not be detrimental to the resource.*

The project traverses land designated as Open Space/Recreation, Low-density Residential and Public Facilities according to the City of Carpinteria General Plan. Compatible uses within the Open Space/Recreation classification include city parks, golf courses, and beaches. Low-density Residential areas are intended to allow single-family detached dwelling units on large lots. Public Facility areas include uses that are compatible with schools, fire and police stations, and other municipal services (City of Carpinteria 2003).

City of Carpinteria Zoning Code

Table 4.10-2 summarizes the zones that would be crossed by the proposed project in the City of Carpinteria. Section 14.62.030 of the City of Carpinteria zoning code states that transmission lines are permitted as a conditional use in all zones crossed by the proposed project with approval of a Conditional Use Permit (City of Carpinteria n.d.). However, the CPUC has preemptive jurisdiction over the construction, maintenance, and operation of public utilities in the State of California; therefore, no local discretionary permits would be required (Subsection 4.10.2.2, "State").

Special Ecological Areas

The proposed project would not cross designated conservation, preservation, or special ecological areas (USFWS 2013; CDFW n.d.).

4.10.3 Impact Analysis

4.10.3.1 Methodology and Significance Criteria

General plans, ordinances, and land use and zoning maps were reviewed to determine whether the proposed project would be consistent with regional and locally adopted land use plans, goals, and policies.

The significance criteria were defined based on the checklist items in Appendix G of the CEQA Guidelines. The proposed project would cause a significant impact on land use if it would:

a) Physically divide an established community;

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

c) Conflict with any applicable Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP).

Significance criterion (c) ("Conflict with any applicable HCP or NCCP") does not apply to the proposed project. The project would not be located within an adopted HCP or NCCP area; therefore,

this significance criterion is not applicable.

4.10.3.2 Applicant Proposed Measures

There are no Applicant Proposed Measures for land use and planning associated with the proposed project.

4.10.3.3 Environmental Impacts

Impact LU-1: Physically divide an established community.
LESS THAN SIGNIFICANT

The majority of Segment 1 would cross vacant/undeveloped open space through the Transverse Mountains. Segment 1 would parallel existing transmission lines as it enters the Casitas Substation located at the south end of Casitas Springs. Prior to entering the substation, Segment 1 would be located near existing residences in Casitas Springs. Segment 1 would not create a physical barrier, nor would it create an obstacle that would be considered a physical barrier to the surrounding community because it would parallel existing transmission lines and would not prevent ingress and egress to existing adjacent residences.

The majority of Segment 2 would also cross vacant/undeveloped open space, along with other low intensity land uses, including agriculture located west of the Casitas Substation. Segment 2 would parallel existing transmission lines for its entire length. Due to its rural location and collocation with existing transmission lines, Segment 2 would not create a physical or perceived physical barrier dividing an established community.

Segment 3A would cross a variety of land uses, including agriculture and recreation, and densely populated residential areas in the City of Carpinteria. This segment would be located entirely within SCE ROW. The majority of Segment 3A would parallel Foothill Road, Casitas Pass Road, and portions of Shepard Mesa Drive. Segment 3A would not create a physical or perceived physical barrier dividing an established community because it would be located in existing SCE ROW and would not prevent the ingress and egress of traffic onto parallel and adjacent streets.

Segment 3B would primarily cross agricultural lands. The majority of this segment would be located in existing SCE ROW, except in one location where the segment would be routed to avoid residences. Segment 3B would not create a physical or perceived physical barrier dividing an established community because it would be located in existing SCE ROW, replace existing structures, and would be relocated to avoid existing residences.

Segment 4 would be located in SCE ROW and parallel existing transmission lines for its entire length. This segment would cross vacant/undeveloped open space, agriculture, residential, and education land uses. Proposed structures would replace existing structures in approximately the same locations. Segment 4 would not create a physical or perceived physical barrier dividing an established community because it would be located in existing SCE ROW.

Other project components, including the Getty Tap, removal of subtransmission lines, and work within existing substations as discussed in Chapter 2 “Project Description,” would not create physical or perceived physical barriers dividing an established community because each of these project features would be located within existing SCE ROW or property owned by SCE.

Therefore, impacts under this criterion would be less than significant.

Impact LU-2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

LESS THAN SIGNIFICANT

Los Padres National Forest

Segment 4 would consist of four structures, including structure pads, as well as access roads on lands administered by the Los Padres National Forest. Proposed construction activities on Forest Service–administered lands include improving existing access roads, grading around existing structures, installing permanent retaining walls, removing lattice steel structures, and installing new tubular steel poles. These construction activities, along with operation of the proposed project, would not significantly degrade the current physical condition and surrounding natural condition of lands administered by the Los Padres National Forest because all work would be done in existing SCE ROW and adjacent to existing transmission lines. Therefore, the proposed project would not conflict with the objectives of the Los Padres Land Management Plan.

Ventura County

The proposed project would be compatible with surrounding uses and parallel existing transmission lines. Disruption of natural vegetation and agricultural activities would be minimized through the use of existing access roads and structure pads. Therefore, the proposed project would not conflict with the Ventura County General Plan and Ojai Valley Area Plan. In addition, the proposed project would not conflict with the Ventura County zoning ordinance because transmission lines are considered an allowable use in all zones crossed by the proposed project.

City of Ventura

The City of Ventura's general plan and zoning ordinance do not include restrictions with regard to public utilities that would be applicable to the proposed project. Therefore, the proposed project would not conflict with the general plan and zoning ordinance.

Santa Barbara County

The proposed project would minimize impacts to open lands and agricultural lands by utilizing existing SCE ROWs and access roads. Approximately 5 of the 120 miles of access roads would need to be widened, which would result in additional disturbance to open lands and agricultural lands. Agricultural uses outside of the existing SCE ROW and access roads would not be disturbed above Foothill Road and east and above Casitas Pass road. Agricultural uses adjacent to and within the SCE ROW would continue during construction and operation. Vegetation, including crops and fruit trees, would be removed within proposed structure pads that need to be cleared of vegetation. Therefore, the proposed project would be consistent with the Santa Barbara County General Plan Land Use Element.

Portions of Segment 3A and Segment 4 would be located in the Santa Barbara County Coastal Zone. The coastal land use plan requires that projects crossing fault lines within the coastal zone include additional safety standards. The proposed project would be designed based on the results of the

geotechnical studies conducted by the applicant, which would identify fault lines and areas of liquefaction. Depending on the results of the geotechnical studies, the applicant may implement additional safety features into the design of the project prior to final engineering, if applicable. The proposed project would minimize impacts to sensitive viewsheds in the coastal zone by being located adjacent to existing transmission lines. In addition, disturbed areas would be restored after construction (Section 4.1, "Aesthetics" addresses impacts on the viewshed in the coastal zone). Therefore, the proposed project would be consistent with the Santa Barbara County Coastal Land Use Plan. See the attached Appendix G, California Coastal Zone Land Use Compatibility, for more information.

The proposed project would not conflict with the Santa Barbara County Land Use and Development Code and Coastal Zoning Ordinance because transmission lines are considered an allowable use in all zones crossed by the proposed project. In addition, the applicant would acquire the necessary construction permits required by the county, including permits required by the county's grading code.

City of Carpinteria

The proposed project would be located next to areas designated as open space or agriculture in the general plan. The proposed project would utilize existing SCE ROW, which would minimize impacts to adjacent areas that are designated as open space and agriculture. Ingress and egress to and from these areas could be limited during construction; however, long-term access limitations would not be expected. In addition, because the project would parallel existing transmission lines, adjacent land uses would continue unchanged by the construction, operation, and maintenance of the proposed project. Therefore, the proposed project would be consistent with the City of Carpinteria General Plan and Local Coastal Program. In addition, the proposed project would not conflict with the City of Carpinteria zoning ordinance because transmission lines are considered an allowable use in all zones crossed by the proposed project.

Therefore, impacts under this criterion would be less than significant.

4.10.4 Mitigation Measures

No mitigation measures are required.

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4.11 Noise and Vibration

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to noise and vibration. The analysis presented in this section focuses on impacts to community sensitive receptors, based on human response to changes in noise and vibration levels. The potential impacts of noise on biological resources are discussed in Section 4.4, "Biological Resources." The work associated with the Getty, Goleta, Ortega, Ventura, and Santa Barbara Substations would occur within existing structures and would not expose sensitive receptors to noise in excess of existing levels; therefore, these components of the proposed project are not discussed further in this section.

4.11.1 Environmental Setting

4.11.1.1 Definitions

Noise

Noise is commonly defined as an unwanted airborne sound, which occurs as a rapid fluctuation of air pressure above and below the atmospheric pressure. To describe environmental noise at the regional and local levels, and to assess impacts on areas sensitive to community noise, an understanding of noise fundamentals is necessary. There are several ways to measure noise, depending on the source, the receiver (human response to changes in noise and vibration levels), and the reason for measurement. The most common scale for sound levels is the A-weighted scale, which has been adopted by regulatory bodies worldwide. The A-weighted scale approximates the response in a manner that corresponds to how a human perceives sound.[1] Sound levels for environmental noise analyses are commonly reported in A-weighted decibels (dBA).

A-weighted sound levels are typically measured or presented as the equivalent sound pressure level (Leq), which is the logarithmic average noise energy level due to all sources (for example, the ambient noise level in addition to construction and traffic noise) in a given area for a defined period of time (for example, 1 hour or 24 hours). The Leq is commonly used to measure steady-state sound or noise that is usually dominant. Statistical methods are used to capture the dynamics of a changing acoustical environment. Statistical measurements are typically denoted by L"xx," where "xx" represents the percentage of time the sound level is exceeded. For example, L_{90} represents the noise level exceeded during 90 percent of the measurement period. Similarly, L_{10} represents the noise level exceeded for 10 percent of the measurement period. The relative A-weighted noise levels of common sounds in the environment and industry for various sources are provided in Table 4.11-1.

[1] Studies have reported that the human annoyance or disturbance related to sound levels correlates with the A-scale (Caltrans 1998).

Table 4.11-1 Typical Sound Levels Measured in the Environment and Industry

Noise Source at a Given Distance (feet)	A-Weighted Sound Level (dBA)	Qualitative Description
Carrier deck jet operation Jet takeoff (200 feet)	140 130 120	Pain threshold
Auto horn (3 feet) Jet takeoff (1,000 feet) Shout (0.5 feet)	110 100	Maximum vocal effort
Subway station (50 feet) Heavy truck (50 feet)	90	Very annoying; hearing damage (8-hour, continuous exposure)
Pneumatic drill (50 feet) Freight train (50 feet) Freeway traffic (50 feet)	80 70 to 80 70	Annoying Intrusive (telephone use difficult)
Air conditioning unit (20 feet) Light auto traffic (50 feet) Living room/Bedroom	60 50 40	Quiet
Library/Soft whisper (5 feet) Broadcasting/Recording studio	30 20 10	Very quiet Just audible

Source: NYSDEC 2001 (Adapted from Table E.)

Another metric used to determine the impact of environmental noise is the difference in human responses to daytime and nighttime noise levels. During the evening and at night, exterior background noises are generally lower than during the day. However, most household noise also decreases at night and exterior noise becomes more noticeable. Furthermore, most people sleep at night and are therefore more sensitive to intrusive noises. To account for human sensitivity to evening and nighttime noise levels, the Daytime-Nighttime Noise Level (Ldn) and Community Noise Equivalent Level (CNEL) metrics were developed. The Ldn accounts for the greater annoyance of noise during the night (10:00 p.m. to 7:00 a.m.). The CNEL accounts for the greater annoyance of noise during the evening (7:00 p.m. to 10:00 p.m.) and nighttime hours.

The effects of noise on people can be listed in three general categories:

- Subjective effects of annoyance, nuisance, dissatisfaction
- Interference with activities such as speech, sleep, learning
- Physiological effects such as startling and hearing loss

In most cases, environmental noise may produce effects in the first two categories only. No completely satisfactory way exists to measure the subjective effects of noise or to measure the corresponding reactions of annoyance and dissatisfaction. This lack of a common standard is primarily due to the wide variation in individual thresholds of annoyance and habituation to noise. Thus, an important way of determining a person's subjective reaction to a new noise is to compare it to the existing or "ambient" environment to which that person has adapted. In general, the more the level or the tonal (frequency) variations of a noise exceed the previously existing ambient noise level or tonal quality, the less acceptable the new noise will be, as judged by the exposed individual.

The general human response to changes in noise levels that are similar in frequency content (for example, comparing increases in continuous [Leq] traffic noise levels) is summarized as follows:

- A 3-dBA change in sound level is a barely noticeable difference.
- A 5-dBA change in sound level is typically noticeable.
- A 10-dBA change is perceived by the listener as a doubling in loudness.

Noise levels naturally attenuate (i.e., diminishes in loudness) as a function of the distance between the source and receptor. Through the air, sound reduces with distance due to (1) divergence, (2) absorption/diffusion, and/or (3) shielding (FTA 2006). For sources of noise emanating from a single location or grouped closely together (i.e., point sources), noise attenuates at a rate of approximately 6 dBA for each doubling of distance from the source, assuming no presence of physical barriers, vegetation, and/or changes in topography along the path to the receiver.

Vibration

Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. Vibratory motion is commonly described by identifying peak particle velocity, which is generally accepted as the most appropriate descriptor for evaluating building damage. However, human response to vibration is usually assessed using amplitude indicators (root-mean square) or vibration velocity levels measured in inches per second or in vibration decibels (VdB). According to the Federal Transit Administration (FTA), the background velocity level in residential areas is usually 50 VdB (FTA 2006). Although the perceptibility threshold is about 65 VdB, human response to vibration is not usually significant unless the vibration exceeds 70 VdB.

One of the major problems in developing suitable criteria for groundborne vibration is that there has been relatively little research into human response to vibration or, in particular, into human annoyance with building vibration. General assessment thresholds cited by the FTA conclude vibration levels between 72 to 80 VdB per day are acceptable for residential uses (FTA 2006).

Attenuation of the vibration intensity depends on several factors, such as the source (e.g. vehicle suspension, roadway surface, speed, depth of the source), the vibration path (e.g., soil type and layering, presence of rock layers, and depth of water table), the characteristics of the receiver (foundation type, building construction, and acoustical absorption), and presence of other natural or man-made barriers.

4.11.1.2 Regional and Local Setting

The proposed project components would be located in Santa Barbara County and Ventura County. Most of the construction activities along the proposed 66-kilovolt (kV) subtransmission line segments, and telecommunication system installation at substations, would occur in unincorporated areas of both counties, except for those components located in the City of Carpinteria's jurisdiction. Primary land use categories within the proposed project area include rural, open space/recreation, urban, low residential, and public facility. Existing noise sources identified in these areas include traffic along local roadways, aircraft overflights, and operation of agricultural equipment. Main roadways in the proposed project area include North Ventura Avenue/State Route (SR) 33, Casitas Pass Road, and multiple arterial local routes. The closest airports to the proposed project components are the Santa Barbara Airport (18 miles from the

Carpinteria Substation), Oxnard Airport (7 miles from the Santa Clara Substation), and Camarillo Airport (8 miles from the Santa Clara Substation).

Sensitive Receptors

The noise and vibration environment within the proposed project area is also characterized by the presence of noise- and vibration-sensitive land uses. These sensitive land uses are generally defined as locations where the presence of unwanted sound or vibration could adversely affect the designated land uses. Typically, sensitive receptors on noise-sensitive lands include residences, hospitals, places of worship, libraries and schools, nature and wildlife preserves, and parks. Table 4.11-2 presents the noise-sensitive receptors identified per project component, within a 1-mile radius. The predominant types of receptors in the area are single-family residences, a school, and recreational users of the Los Padres National Forest (SR 33 Corridor).

Table 4.11-2 Sensitive Receptors within a 1-mile Radius of the Proposed Project

Project Component	Jurisdiction	Sensitive Receptor	Distance and Direction from Project Component
66-kV Substransmission Line / Telecommunications Route			
Segment 1	Ventura County	Ventura Missionary Christian	0.84 mile, SW
		Ventura Missionary Church	0.85 mile, SW
		Foster Park	0.69 mile, SW
Segment 2	Ventura County	First Baptist Church	0.39 mile, NE
Segment 3A	City of Carpinteria	Carpinteria Middle School	0.84 mile, S
		Main Elementary School	0.87 mile, S
		Aliso Elementary School	0.83 mile, SW
		Carpinteria Family School	0.26 mile, S
		Canalino Elementary School	0.26 mile, S
		Howard School	0.04 mile, S
		First Church of Christ Scientist	0.78 mile, S
		Carpinteria Community Church	0.67 mile, S
		Carpinteria Valley Baptist Church	0.69 mile, S
		Church of Christ	0.68 mile, S
		The Carpenters Chapel	0.67 mile, S
		Faith Lutheran Church	0.36 mile, S
		Saint Joseph Catholic Church	0.19 mile, S
		First Baptist Church of Carpinteria	0.03 mile, N
		Rincon Beach Park	1.00 mile, S
		Heath Ranch Park	0.46 mile, SW
		Memorial Park	0.62 mile, SW
		Franklin Park	0.22 mile, S
		El Carro Park	0.01 mile, S
		Carpinteria State Beach	0.98 mile, S
		Carpinteria Salt Marsh Reserve	0.91 mile, SW
		Salt Marsh Nature Reserve	0.96 mile, SW
	Santa Barbara County	Monte Vista Park	0.60 mile, S
		Lions Park	Crossed by project
		Cate School	0.46 mile, N
Segment 3B	Ventura County	Los Padres National Forest	0.78 miles, N

Table 4.11-2 Sensitive Receptors within a 1-mile Radius of the Proposed Project

Project Component	Jurisdiction	Sensitive Receptor	Distance and Direction from Project Component
Segment 4	Santa Barbara County	Los Padres National Forest	Crossed by project (0.25 mile)
	City of Carpinteria	Carpinteria High School	0.09 mile, W
		Foothill High School	0.14 mile, W
		Rincon High School	0.15 mile, W
		Church of Nazarene	0.89 mile, SW
Substations			
Santa Clara	Ventura County	Residences (east of City of Buenaventura)	0.74 miles, SW 0.48 miles, SE
Casitas	Ventura County	Residences surrounding the substation	Closest residences: 0.03 mile, N 0.03 mile E
Carpinteria	City of Carpinteria	Carpinteria High School	0.07 mile, W
		Residences surrounding the substation	Closest Residence: 0.07 mile, S

Source: E & E 2013; SCE 2012

Existing Ambient Noise Levels

In February 2012, the applicant conducted monitoring of the ambient noise conditions within the vicinity of the proposed project components. Table 4.11-3 summarizes the ambient noise levels reported at each of the monitoring locations. Figure 4.11-1 presents monitoring locations and receptors identified in the vicinity of the proposed project components. The applicant conducted 24-hour sound level measurements at the five closest receptors in the vicinity of Segments 3B and 4, and at each substation property line. Ambient hourly noise levels measured by the applicant at the Carpinteria Substation ranged from 41 to 57 dBA Leq; from 48 to 62 dBA Leq at Casitas Substation; and from 42 to 58 dBA Leq at the Santa Clara Substation. Calculated CNEL at each substation location is provided in Table 4.11-3.

Table 4.11-3 Ambient Noise Levels reported by the applicant at closest receptors

Project Component	Measurement location	Measured Noise Level
66-kV Subtransmission Line / Telecommunication Route		**dBA, Leq**
Segment 3B	East of SR-150/SR-192 junction	54
	South of SR-150/Mission Ridge Road junction	51
	South of SR-150/Mission Ridge Road junction	38
Segment 4	Above Gobernador Canyon Road, Santa Barbara County	50
	East of Stanley Park Road, Santa Barbara County	52
Substations		**CNEL**
Santa Clara	Southwestern property line	55
Casitas	Northern property line	64
Carpinteria	Northwestern property line	53

Source: ARCADIS 2012.
Note: The applicant conducted 24-hour sound level measurements at the five closest receptors in the vicinity of the proposed pole and conductor removal/replacement sites (Segments 3B and 4) and at nearest receptors at each of the substation property lines. At each location, the applicant ran measurements from midnight to midnight with data logging each 30 minutes.
Key:
CNEL Community Noise Equivalent Level
dBA A-weighted decibel
Leq Equivalent sound pressure level
SR State Route

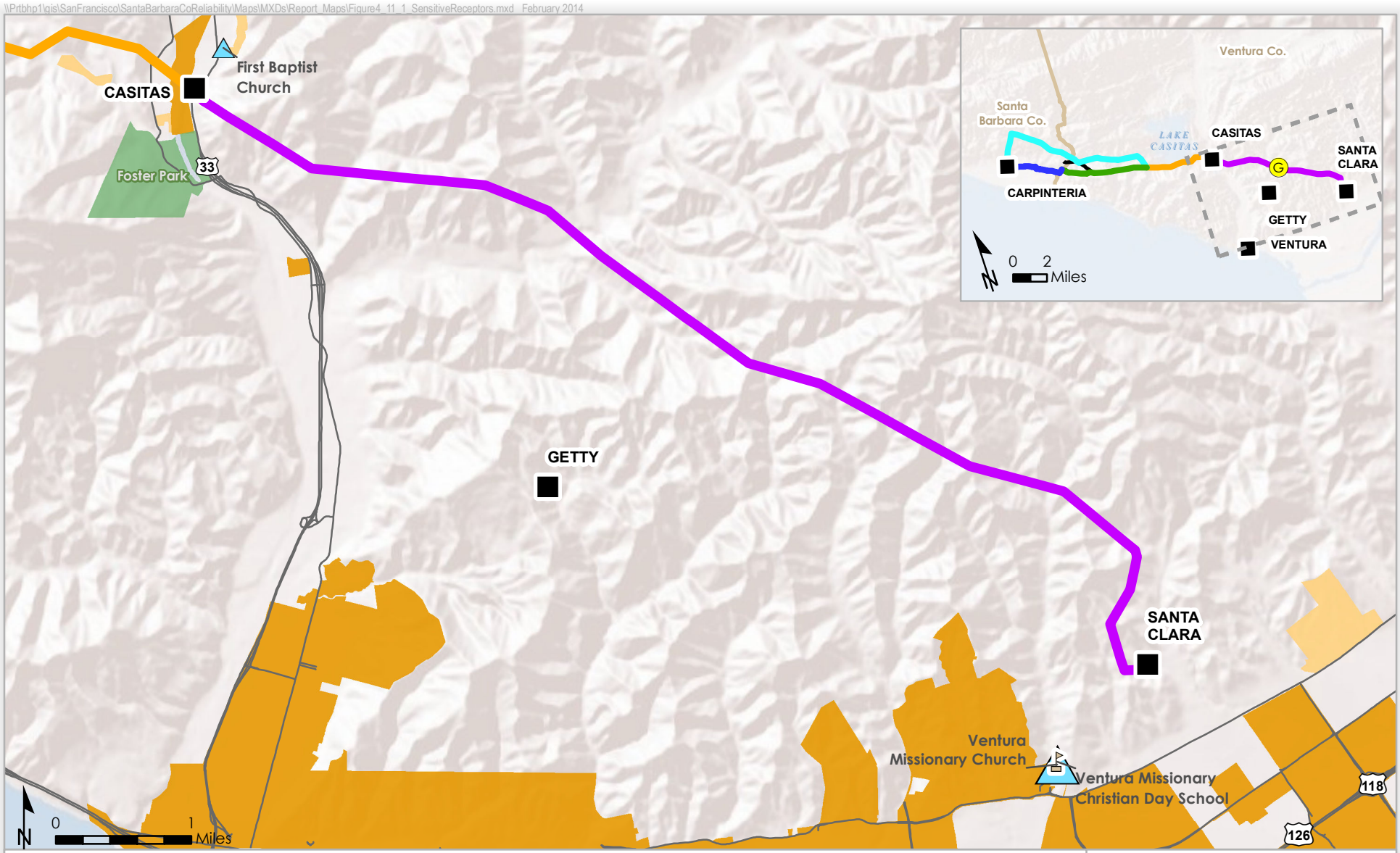

Figure 4.11-1a Sensitive Receptors within a 1-mile Radius of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

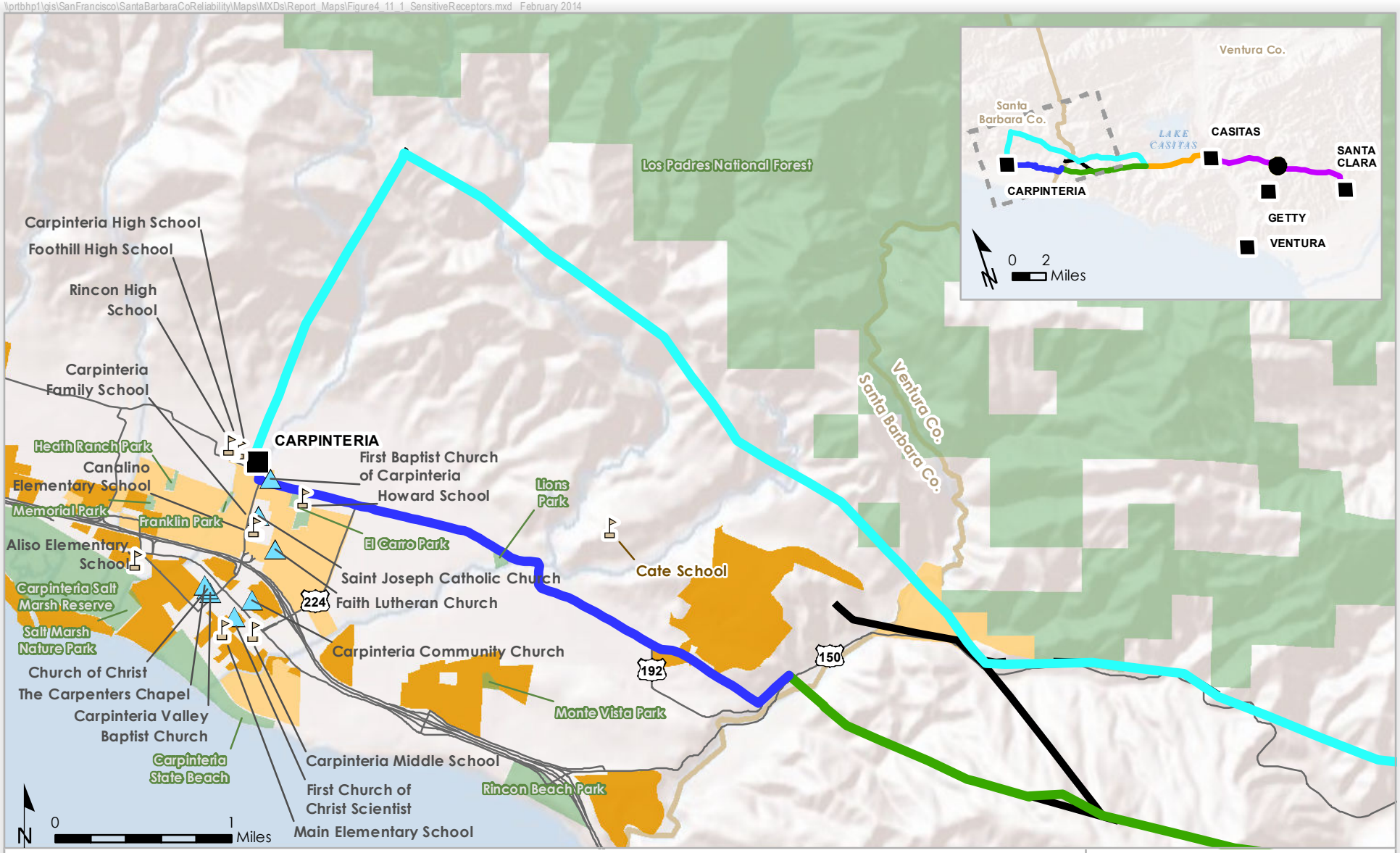

Figure 4.11-1b
Sensitive Receptors within a 1-mile Radius of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

4.11.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern noise in the project area.

4.11.2.1 Federal

No federal noise standards directly regulate environmental or community noise. Regulating noise is generally a responsibility of local governments. However, several federal agencies have developed community noise guidelines.

The U.S. Environmental Protection Agency has published guidelines on recommended maximum noise levels to protect public health and welfare with adequate margins of safety. A noise level of 70 dBA Leq over a 24-hour period [Leq (24)] was identified as the level of environmental noise that could lead to hearing loss over a 40-year period (EPA 1978). In addition, noise levels of 55 dBA Ldn outdoors and 45 dBA indoors were identified as noise thresholds that would prevent activity interference or annoyance (FTA 2006). Workers' exposure to noise is regulated by the federal occupational noise regulations established by the Occupational Safety and Health Administration in 29 Code of Federal Regulations (CFR) 1910.95. Table 4.11-4 shows the federal guidelines and regulations for exterior noise.

Table 4.11-4 Federal Guidelines and Regulations for Exterior Noise (dBA)

Agency	L_{eq}	L_{dn}
Federal Energy Regulatory Commission	[49]	55
Federal Highway Administration	67	[67]
Federal Aviation Administration	[59]	65
U.S. Department of Transportation – Federal Rail and Transit Authorities[a,b]	Sliding scale[e]	Sliding scale[e]
U.S. Environmental Protection Agency[c]	[49]	55
U.S. Department of Housing and Urban Development[d]	[59]	65

Sources:
[a] FRA 2005 (Updated to latest revision 2005)
[b] FTA 2006
[c] EPA 1978
[d] CFR Title 24 Part 51B (U.S. Department of Housing and Urban Development 1991)
[e] Refer to Figure 3.10-2 of FRA 2005
Note: Brackets around numbers (e.g., [59]) indicate calculated equivalent standard for a steady noise source. Because the Federal Highway Administration regulates peak noise level, the Ldn is assumed equivalent to the peak noise hour.
Key:
DBA A-weighted decibels
Ldn Daytime-Nighttime Noise Level
Leq equivalent sound pressure level

In regard to groundborne vibration and groundborne noise, agencies such as the FTA and the U.S. Bureau of Mines have extensively studied the effects of ground vibration and damage on structures. The FTA has established construction vibration damage criteria of 0.12 inches per second or 90 VdB for buildings extremely susceptible to vibration damage.

U.S. Forest Service

A 0.25-mile portion of the proposed 66-kV subtransmission line Segment 4 would be located within the Los Padres National Forest, involving the potential use of helicopters for installing the majority of the proposed structures. The U.S. Forest Service (USFS) directive FSH 1909.12 (Land Management Planning Handbook) identifies noise as key criteria for the definition of wilderness areas; however, no specific standards applicable to USFS land uses are provided within this regulation. Notwithstanding, the USFS has published a study addressing the potential effects of aircraft overflights over National Forest wilderness areas (USDA 1992). Based on the conclusions from this study, the USFS discourages flight operations over wilderness areas below 2,000 feet above ground level (AGL). This restriction is consistent with the Federal Aviation Administration (FAA) policy for noise on federally managed areas and FAA's Advisory Circular AC No: 91-36D.

The Los Padres National Forest Land Use Management Plan emphasizes land use objectives that are expected to result in the sustainability of the national forest and its healthy maintenance over the long term. Although the objectives, goals, and policies described in this plan do not include noise standards, major conclusions from the Land Management Plan Final Environmental Impact Statement (FEIS) acknowledges the need to evaluate increased noise levels in or in the proximity to wilderness areas. In particular, the FEIS recognizes that areas where construction and reconstruction of roads near wilderness boundaries could occur, short-term increases in noise levels and would affect recreational users on a temporary basis (USDA 2005).

Federal Aviation Administration Noise Recommendations

Since the proposed project would involve helicopter use over federal lands (Los Padres National Forest), the following FAA guidelines would be applicable.

Noise Policy for Management of Airspace over Federally Managed Areas (February 9, 2012)

It is the policy of the FAA in its management of the navigable airspace over federal lands to exercise leadership in achieving an appropriate balance between efficiency, technological practicability, and environmental concerns, while maintaining the highest level of safety. This policy promotes joint efforts between the FAA and the federal agencies managing noise-sensitive areas (e.g., USFS) to enhance the compatibility between management of the airspace and the management goals of these agencies.

Advisory Circular AC No: 91-36D

The FAA recommends that avoidance of noise-sensitive areas, if practical, is preferable to overflight at relatively low altitudes. Pilots operating noise-producing aircraft over noise-sensitive areas should make every effort to fly not less than 2,000 feet AGL, weather permitting. For the purpose of this Advisory Circular, the ground level of noise-sensitive areas is defined to include the highest terrain within 2,000 feet AGL laterally of the route of flight, or the uppermost rim of a canyon or valley. The intent of the 2,000-foot AGL recommendation is to reduce potential interference with wildlife and complaints of noise disturbances caused by low-flying aircraft over noise-sensitive areas.

4.11.2.2 State

No statewide regulations address noise impacts; however, the State of California requires local governments to perform noise surveys and implement a noise element as part of its General Plan (OPR 2003), as established in the California Government Code Section 65302(f). In addition, the State recommends interior and exterior noise standards by land use category and standards for the compatibility of various land uses and noise levels. Four type of land uses are defined as incompatible with noise above 65 CNEL: residences, schools, hospitals and convalescent homes, and places of worship. These state-level standards are commonly applicable for permanent noise sources and constitute the basis for local government noise elements.

4.11.2.3 Regional and Local

The proposed project would be located in multiple counties and municipalities, specifically within Santa Barbara County, the City of Carpinteria, and Ventura County. All jurisdictions regulate environmental noise sources through policies and/or ordinances. These regulations are described as follows.

Santa Barbara County

Santa Barbara County Comprehensive General Plan – Noise Element

The Santa Barbara County General Plan Noise Element develops a statement of public policy to address excessive noise. It identifies major sources of noise within the county and potential methods of attenuation or abatement. Significant noise impact problems in Santa Barbara County are primarily associated with transportation facilities; therefore, applicable noise reduction measures for the proposed project involve reducing motor vehicle noise and noise from commercial and industrial sources. Recommended vehicle noise reduction measures include establishing truck routes, reducing vehicle speed, and regulating traffic flow. Additionally, recommendations for reducing noise from commercial and industrial sources include using enclosures for machinery placed outdoors, as well as using structures and solid walls around the perimeter of a source as noise barriers. The Noise Element also provides directions for the countywide noise ordinance and functions of the noise control officer (County of Santa Barbara 2009).

Santa Barbara County Municipal Code

Title 9 (Public Peace and Safety), Chapter 9.16 of the Santa Barbara Municipal Code sets the regulation for noise control. In particular, Section 9.16.015 restricts construction work during nighttime hours between 8 p.m. of any day and 7 a.m. of the following day to erect, construct, demolish, excavate for, alter, or repair any building or structure if the noise level generated exceeds the ambient noise level by 5 dBA at the nearest property line used for residential purposes, unless a special permit has been granted by the Chief of Building and Zoning. Before granting this special permit, the County considers potential impacts of construction noise in the vicinity of the proposed work site, existing land uses, and whether night work is in the general public interest.

Additionally, Section 9.16.025 regulates noise affecting parcels zoned or used for residential purposes. Hours of operation for the use of mechanical equipment other than vehicles and other proposed project activities such as grading, vegetation removal, and restoration would be limited to 7 a.m. to 7 p.m. Monday through Saturday, and from 8 a.m. to 7 p.m. on Sundays and holidays.

Moreover, this regulation requires insulation for all mechanical equipment other than vehicles operating at the property line of any adjacent parcel used or zoned for residential, institutional or park purposes to avoid exceeding a noise level limit of 60 dBA CNEL.

Santa Barbara County Environmental Thresholds and Guidelines Manual

This manual establishes thresholds of significance for assisting in the determination of significant noise impacts. For projects proposed within the County's jurisdiction, the following criteria are defined (County of Santa Barbara 2008):

> *a. A proposed development that would generate noise levels in excess of 65 dBA CNEL and could affect sensitive receptors would generally be presumed to have a significant impact.*
>
> *b. Outdoor living areas of noise-sensitive uses that are subject to noise levels in excess of 65 dBA CNEL would generally be presumed to be significantly impacted by ambient noise. A significant impact would also generally occur where interior noise levels cannot be reduced to 45 dBA CNEL or less.*
>
> *c. A project will generally have a significant effect on the environment if it will increase substantially the ambient noise levels for noise-sensitive receptors adjoining areas. Per item a., this may generally be presumed when ambient noise levels affecting sensitive receptors are increased to 65 dBA CNEL or more. However, a significant effect may also occur when ambient noise levels affecting sensitive receptors increase substantially but remain less than 65 dBA CNEL, as determined on a case-by-case level.*
>
> *d. Noise from grading and construction activity proposed within 1,600 feet (0.3 miles) of sensitive receptors, including schools, residential development, commercial lodging facilities, hospitals or care facilities, would generally result in a potentially significant impact. To mitigate this impact, construction within 1,600 feet of sensitive receptors shall be limited to weekdays between the hours of 8 a.m. to 5 p.m. only. Noise attenuation barriers and muffling of grading equipment may also be required.*

Ventura County

Ventura County General Plan

The goal of the Ventura County General Plan Noise Element is to protect the health, safety, and general welfare of Ventura County residents by eliminating or avoiding adverse noise impacts on existing and future noise-sensitive uses (County of Ventura 2011). To accomplish this goal, the General Plan establishes a set of community noise abatement policies such as noise compatibility criteria with surrounding for all discretionary developments involving noise exposure or generation in excess of established standards. For controlling sources proposed to be located near any noise-sensitive use, this policy establishes the following maximum allowable 1-hour average noise levels (Leq):

- 55 dBA (or ambient noise level plus 3 dBA, whichever is greater) from 6 a.m. to 7 p.m. on weekdays;
- 50 dBA (or ambient noise level plus 3 dBA, whichever is greater) from 7 p.m. to 10 p.m.; and
- 45 dBA (or ambient noise level plus 3 dBA, whichever is greater) from 10 p.m. to 6 a.m.

Noise control measures required in the Noise Element need to address the following priorities:

- Reduction of noise emissions at the source;
- Attenuation of sound transmission along its path, using barriers, landforms modification, dense plantings, and the like; and
- Rejection of noise at the reception point via noise control building construction, hearing protection or other means.

Ventura County Ordinance No. 4124

Chapter 2, Division 6 of the Ventura County Ordinance Code restricts loud noise at residential receptors from 9 p.m. to 7 a.m. of the following day, from any source located at a distance of 50 feet from the receptor property line.

Ventura County Construction Noise Threshold Criteria and Control Plan

To address specific construction noise limits for noise-sensitive locations not currently addressed in the Ventura County General Plan or Ordinance Code, Ventura County has developed noise thresholds and standard noise monitoring and control measures for construction activities within the County's jurisdiction (County of Ventura 2010). These thresholds are summarized in Tables 4.11-5 and 4.11-6.

Table 4.11-5 Ventura County Daytime Construction Noise Threshold Criteria

Construction Duration Affecting Noise-sensitive Receptors	Noise Threshold Criteria[1]	
	Fixed Leq(h), dBA	Hourly Equivalent Noise Level (Leq), dBA[2,3]
0 to 3 days	75	Ambient Leq (h) + 3dB
4 to 7 days	70	Ambient Leq (h) + 3dB
1 to 2 weeks	65	Ambient Leq (h) + 3dB
2 to 8 weeks	60	Ambient Leq (h) + 3dB
Longer than 8 weeks	55	Ambient Leq (h) + 3dB

Source: County of Ventura 2010
Notes:
(1) Daytime noise threshold criteria shall be the greater of these noise levels at the nearest receptor area or 10 feet from the nearest noise-sensitive building.
(2) The instantaneous maximum sound level shall not exceed the threshold by 20 dBA more than 8 times per daytime hour.
(3) Local ambient Leq measurements are required by Ventura County to be made on any mid-week day prior to project work.
Key:
dB decibels
dBA A-weighted decibels
Leq equivalent sound pressure level
Leq(h) hourly equivalent sound level

Table 4.11-6 Evening and Night Construction Noise Threshold Criteria

Receptor Location	Noise Threshold Criteria[1]	
	Fixed Leq(h), dBA	Hourly Equivalent Noise Level (Leq), dBA[2,3]
Residential	50 (evening)	Ambient Leq(h) + 3 dB
Resident, Live-in Institutional	45 (night)	Ambient Leq(h) + 3 dB

Source: Ventura County 2010

Notes:

1 Evening and night noise threshold criteria shall be the greater of these noise levels at the nearest receptor area or 10 feet from the nearest noise-sensitive building.

2 The instantaneous maximum sound level shall not exceed the threshold by 20 dBA more than 8 times per daytime hour.

3 Local ambient Leq measurements are required by Ventura County to be made on a typical mid-week day evening and night prior to project work.

Key:

dB decibels
dBA A-weighted decibels
Leq equivalent sound pressure level
Leq(h) hourly equivalent sound level

City of Carpinteria

Resolution No. 408

This resolution adopts updated and revised environmental review regulations pursuant to the California Environmental Quality Act (CEQA) and the City of Carpinteria Municipal Code, Chapter 8.48. Under this regulation, noise impacts from projects within the City's jurisdiction are evaluated by using quantitative thresholds. Thresholds are based on guidelines provided in the Noise Element of the General Plan. Two sources of sound impacts are evaluated: short-term construction noise and long-term noise associated with the proposed project activities. Project-related noise impacts are significant if they raise existing noise levels to above the applicable criterion or if noise resulting from the project increases average ambient levels that are already above the applicable criterion by more than three dBA, or if project-generated noise results in a 5-dBA increase and the resulting level remains below the maximum considered normally acceptable.

Thresholds for both short-term and long-term noise sources established by the City are as follows:

<u>Temporary Construction Noise</u>

- Temporary construction noise which exceeds 75 dBA CNEL for 12 hours within a 24-hour period at residences would be considered significant. Additionally, where temporary construction noise would substantially interfere with normal business communication, or affect sensitive receptors, such as day care facilities, hospitals or schools, temporary impacts would be considered significant.
- An increase in noise would be considered significant if any of the following conditions occurred for an extended period of time:
  - An increase in noise levels of 10 dBA if the existing noise levels are below 55 dBA (creates a potential significant nuisance effect);
  - An increase in noise levels that exceeds noise level standards if the existing noise levels are between 55 and 60 dBA (violates existing regulatory requirement); or
  - An increase in noise levels of 5 dBA if the existing noise levels are above 60 dBA (violates or worsens a violation of an existing regulatory requirement).

- For vehicular traffic, the City of Carpinteria has set a noise level of 65 Leq[2].

Permanent Noise Sources

- A proposed development that would generate noise levels in excess of 65 dB CNEL and could affect sensitive receptors would be considered to have a significant impact.
- Outdoor living areas of noise sensitive uses that are subject to noise levels in excess of 65 dB CNEL would be considered to be significantly impacted by ambient noise. A significant impact would also occur interior noise levels cannot be reduced to 45 dB CNEL or less.
- A project will have a significant effect on the environment if it will increase substantially the ambient noise levels for adjoining areas.

Noise from Adjacent Stationary Uses (Noise Generators)

- A project which would generate nose levels at the property line which exceed the City's Noise Ordinance Standards is considered potentially significant.
- If a non-residential use, such as a commercial, industrial or school use, is proposed to abut an existing residential use, the noise level of the non-residential use should not exceed the residential standards of 64 dBA CNEL at the adjoining property line.
- Although the noise level could be consistent with the City's Noise Ordinance Standards, a noise level above 65 dBA CNEL at the residential property line could be considered a significant environmental impact.

Other Plans and Regulations

Ojai Valley Planning Area

The proposed 66-kV subtransmission line Segments 2, 3B, and 4 would traverse a portion of the Ojai Valley Planning Area, located south of Lake Casitas. The Ojai Valley Area Plan establishes goals and policies for public services in the area, especially for transportation and circulation. However, no specific noise level standards associated with vehicular traffic or construction noise are provided in this plan (County of Ventura 2005).

4.11.3 Impact Analysis

4.11.3.1 Methodology and Significance Criteria

The evaluation of noise and vibration impacts from the proposed project involved a review of relevant city and county noise standards; an assessment of the existing noise environment in the project area; and a projection of noise levels from equipment, vehicles, and activities. County and project maps and satellite images were reviewed to determine the proximity of the proposed project to the closest sensitive receptors and airports. In addition, land use plans and topographic and noise contours maps were researched for relevant information about the existing noise and vibration levels. Based on the distance from each of the proposed project components to the identified sensitive receptors and the composite noise levels modeled by the applicant, predicted

[2] The Ldn and Leq measures are expressed on the dBA sound level scale. For purposes of comparing noise level indices, the City of Carpinteria has established that Leq (for the peak-traffic period) is approximately equivalent to the Ldn.

noise levels—as perceived by closest receptors—were estimated and compared with applicable regulatory standards and guidelines.

The significance criteria were defined based on the checklist items in Appendix G of the CEQA Guidelines. The proposed project would cause a significant impact on noise levels if it would:

- Expose persons to, or generate, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose persons to, or generate, excessive groundborne vibration or groundborne noise levels;
- Cause a substantial permanent increase in ambient noise levels in the project vicinity above levels that would exist without the project;
- Cause a substantial temporary increase in ambient noise levels in the project vicinity above levels that would exist without the project;
- Expose people residing near or working on the project to excessive noise levels, for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport; or
- Expose people residing near or working on the project to excessive noise levels, for a project within the vicinity of a private airstrip.

The proposed project components would be located over 7 miles away from existing public airports, public use airports, and private airstrips currently operating in Santa Barbara County and Ventura County. Therefore, impacts related to the last two significance criteria listed above are not applicable.

The vibration impact analysis used the FTA quantitative annoyance assessment method to determine the vibration level at closest sensitive receptors identified in Table 4.11-2. This method estimates the vibration level (Lv, in VdB) at any distance D (in feet) from the following equation:

$$Lv(D) = Lv(25ft) - 30\log(\frac{D}{25})$$

4.11.3.2 Applicant Proposed Measures

The applicant has committed to the following applicant proposed measures (APMs) as part of the design of the proposed project:

- **APM NV-1:** Construction activities will be conducted or phased to ensure that noise generated during construction would not exceed thresholds or durations identified by the City of Carpinteria Resolution No. 408; the County of Ventura noise regulations set forth in the County's Construction Noise Criteria and Control Plan; or the County of Santa Barbara Environmental Thresholds and Guidelines Manual.
- **APM NV-2:** Equipment and trucks used for the proposed project shall employ the best available noise control techniques to the extent feasible.

- **APM NV-3:** Stationary sources shall be located as far from adjacent noise-sensitive receptors as reasonably possible and shall be enclosed if feasible.
- **APM NV-4:** Where feasible, temporary portable sound barriers would be deployed where construction noise would cause noise levels at sensitive receptor locations to be in excess of an applicable criteria threshold. For purposes of this APM, schools would only be considered sensitive receptor locations during instruction hours.
- **APM NV-5:** At least two weeks prior to the anticipated start of construction at a particular location, the applicant will notify all property owners within 300 feet of that location that construction activities are about to commence at that location.

4.11.3.3 Environmental Impacts

Impact NS-1: Noise levels in excess of standards established in the local general plan or noise ordinance.

LESS THAN SIGNIFICANT WITH MITIGATION

The applicant would conduct construction activities during weekday daytime hours from 7 a.m. to 7 p.m. in Ventura County and from 8 a.m. to 5 p.m. in Santa Barbara County. The proposed project would be constructed over a 24-month period, likely in concurrent phases, and would occur no more than three consecutive days at each site. Construction equipment operation, use of heavy-duty vehicles, road work, foundation removal, and helicopter use for the installation of the proposed 66-kV subtransmission lines would be the primary sources of noise associated with construction activities for the proposed project components.

Noise levels resulting from construction equipment are dependent on several factors, including the number and type of equipment operating, the level of operation, and the distance between equipment and receptors. Heavy construction equipment typically generates noise levels up to approximately 98 dBA at 50 feet. In addition, noise from trucks, commuter vehicles, and other on-road equipment, which would mainly be along streets and access roads, would produce peak levels of approximately 88 dBA at 50 feet from the source (FTA 2006). Typical maximum noise levels from construction equipment that would be used for the proposed project is shown in Table 4.11-7.

Table 4.11-7 Equipment Types and Typical Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 feet from source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Crane, Mobile	83
Dozer	85
Generator	81
Grader	85
Loader	85
Manlift	85
Auger	98

Table 4.11-7 Equipment Types and Typical Noise Emission Levels

Equipment	Typical Noise Level (dBA) 50 feet from source
Roller	74
Truck	88

Source: FHWA 2006

The loudest equipment during construction would contribute to a composite average or equivalent site noise level. Based on the full list of equipment and expected usage, the applicant conducted a noise modeling study to estimate composite noise levels from proposed construction activities at different contour distances and at noise-sensitive receptors located near substations. Tables 4.11-8 and 4.11-9 summarize the results from this study for the 66-kV subtransmission line and proposed work at substations, respectively. Specifically, Table 4.11-8 indicates that receptors located between 132 to 183 feet from construction activities along the proposed 66-kV subtransmission lines would perceive noise levels that exceed 75 dBA Leq.

Table 4.11-8 Estimated Noise Contour Distances for 66-kV Subtransmission Line Construction Activities

Construction Activity	Contour Distance (feet)				
	75 dBA Leq	70 dBA Leq	65 dBA Leq	60 dBA Leq	55 dBA Leq
Conductor removal	183	327	572	975	1,610
Pole Removal	171	307	537	916	1,517
TSP Foundations	173	309	539	924	1,534
TSP Assembly	134	243	428	739	1,240
TSP Erection	132	239	420	726	1,219
Conductor Installation	204	364	630	1,067	1,757

Source: ARCADIS 2012
Key:
dBA A-weighted decibels
kV kilovolt
Leq equivalent sound pressure level
TSP tubular steel pole

Table 4.11-9 Estimated Composite Noise Construction Levels at Closest Receptors for Substation Work

Substation	Loudest Construction Activity	Noise Composite Level at Closest Receptors (dBA CNEL)	Receptor description
Carpinteria Substation (City of Carpinteria, Santa Barbara County)	Conductor installation	80	Carpinteria High School (property line)
		69	Residence located south of substation
Casitas Substation (Unincorporated Ventura County)	Trenching	70	Residence located west of the substation
		69	Residence located northwest of the substation
		65	Residence located north of the

Table 4.11-9 Estimated Composite Noise Construction Levels at Closest Receptors for Substation Work

Substation	Loudest Construction Activity	Noise Composite Level at Closest Receptors (dBA CNEL)	Receptor description
			substation
Santa Clara Substation (Unincorporated Ventura County)	Trenching	43	Residence located southeast of the substation.
		41	Residence located south of the substation
		36	Residence located southwest of the substation

Source: ARCADIS 2012
Key:
CNEL Community Noise Equivalent Level
dBA A-weighted decibels

The applicant would also use small helicopters for the 66-kV subtransmission line wire stringing operations along areas where road access would not be feasible and for marker ball installation. The type of helicopter to be used for subtransmission line construction would be determined in the final engineering design for the proposed project. For the purposes of this EIR, the applicant has indicated that a small single-rotor helicopter such as the Hughes 500E (also known as 369E) would be used. This type of helicopter produces a maximum sound level of 75 dBA at a distance of 500 feet under level flight conditions (Nelson 1987). Additionally, the applicant has reported approximate noise levels from heavy-duty helicopter flying in the range of 85 to 93 dBA at an elevation of 1,000 feet (corresponds to levels of 49 to 57 dBA Leq (h)), and 80 to 85 dBA (44 to 49 Leq(h)) for light duty helicopters at the same elevation. Although the U.S. Forest Service recommended restrictions to helicopter operations in recreational areas, the project would cross USFS lands designated as developed area interface within the Los Padres National Forest; without the presence of sensitive recreational uses along the proposed 0.25-mile segment.

As shown in Tables 4.11-8 and 4.11-9, receptors located in the proximity of the proposed project (less than 200 feet) would be exposed to construction noise levels of 75 dBA Leq or higher, in excess of the applicable standards in Santa Barbara County (Environmental Thresholds and Guidelines Manual), City of Carpinteria (Resolution No. 408), and Ventura County (Construction Noise Threshold Criteria and Control Plan).

Table 4.11-2 shows that three schools and three churches are located within 0.3 miles (1,600 feet) of the proposed Segment 3A work areas and three schools would be located in the proximity of Segment 4 in Santa Barbara County. Santa Barbara County has established a 1,600-foot distance as the threshold of potential significance for construction projects located in the vicinity of sensitive receptors (schools, residential development, commercial lodging facilities, hospitals or care facilities) and requires limiting construction hours from receptors to weekdays between 8 a.m. and 5 p.m. In addition, Santa Barbara County's thresholds states that noise attenuation barriers may be, but are not necessarily, required. APM NV-1 would require compliance with Santa Barbara County requirements during construction, which would limit work to between 8 a.m. and 5 p.m; however, significant impacts could still occur. Therefore, the applicant would implement Mitigation Measure (MM) NV-1, which requires the installation of a temporary noise attenuation barrier for construction activities within 200 feet of sensitive receptors to reduce construction noise levels to

65 dBA at the property line. As a result, noise impacts on sensitive receptors in Santa Barbara County would be less than significant with mitigation.

Several residences as well as Carpinteria High School would be located in the proximity of Carpinteria Substation, in Santa Barbara County. In the City of Carpinteria, temporary construction noise which exceeds 75 dBA CNEL for 12 hours within a 24-hour period at residences would be considered significant. However, composite noise levels at nearby residences are not expected to exceed this limit. Where temporary construction noise would substantially affect sensitive receptors, including schools, this limit would also apply. Estimated composite construction noise at the Carpinteria Substation would exceed 75 dBA at the Carpinteria High School. The applicant would implement APM NV-1, which would require compliance with the City of Carpinteria Resolution 408, which would limit construction activities of 75 dBA CNEL to 12 hours per day. Impacts on sensitive receptors in the City of Carpinteria would be less than significant.

In addition, for vehicular traffic, the City of Carpinteria has set a noise level of 65 Leq[3]. An increase in noise from vehicular traffic would occur on a temporary basis, due to heavy-duty and worker commute vehicle use before and after allowed construction hours. Vehicular traffic noise depend on a range of characteristics related to vehicles and the highways on which they travel, including is vehicle type, engine size, speed, number of wheels and axels, type of tires, as well as pavement type, age, texture and condition. Noise levels from construction vehicles would also depend on traffic flow, distance to receptor, roadway segment and existing shielding. Major contributors to ambient traffic noise levels during construction would be from heavy trucks, as reference noise levels are generally over 78 dBA for speeds over 25 miles per hour (Caltrans 2009). The applicant would implement APM NV-2 and transportation and traffic control measures to control noise from trucks to the extent possible; therefore, impacts from vehicular traffic noise would be less than significant under this criterion.

Ventura County limits construction noise to 75 dBA Leq for a maximum period of three days. There are several sensitive receptors within the vicinity of the existing Santa Clara substation where modification or subtransmission and substation equipment would occur. However, as shown in Table 4.11-9, the composite noise levels from this work would not exceed the 75dBA Leq noise limit In addition, all work on the proposed project would be limited to three consecutive days within a single construction area. Therefore, impacts on sensitive receptors in the County of Ventura would be less than significant.

Impact NS-2: Excessive groundborne vibration or groundborne noise levels.
LESS THAN SIGNIFICANT

Construction vibration would result mainly from the use of heavy-duty construction equipment, e.g., trucks, backhoes, excavators, loaders, and cranes. Additional construction ground vibration sources such as the tamping or compacting of ground surfaces, the passing of heavy trucks on uneven surfaces, and the excavation of trenches would also create perceptible vibration in the immediate vicinity of the proposed project construction sites. Vehicle and heavy duty truck use during construction of the proposed project would generate a continuous but relatively low level of vibration.

[3] The Ldn and Leq measures are expressed on the dBA sound level scale. For purposes of comparing noise level indices, the City of Carpinteria has established that Leq (for the peak-traffic period) is approximately equivalent to the Ldn.

Typical maximum vibration levels from construction equipment that would be used for the proposed project is shown in Table 4.11-10.

Table 4.11-10 Typical Vibration Source Levels for Project Construction Equipment and Estimated Levels at Sensitive Receptors

Equipment Type	PPV at 25 feet (in/sec)	Vibration Level at 25 feet (VdB)	Vibration Level at 50 feet (VdB)	Vibration Level at 158 feet (VdB)
Large bulldozer	0.089	87	78	63
Loaded trucks	0.076	86	77	62
Jackhammer	0.035	79	70	55
Small bulldozer	0.003	58	49	34

Source: FTA 2006
Note: Annoyance or interference with vibration-sensitive activities at different distances
Key:
in/sec inches per second
PPV peak particle velocity
VdB vibration decibels

As shown in the Table 4.11-10, heavy-duty equipment and vehicles involved in project construction would generate vibration levels ranging between 58 and 87 VdB at 25 feet during short-term construction activities, restricted to daytime hours. All receptors located at a distance of 50 feet or beyond would perceive levels below 80 VdB, which is generally acceptable at residential areas for activities that involve less than 30 vibration events of the same kind per day (FTA 2006). Closest sensitive receptors identified in Table 4.11-2 (0.03 miles or 158 feet) would perceive a maximum vibration level of 63 VdB, which is below the human perception threshold (65VdB). Construction-related vibration would only exceed the human perception threshold for receptors located within 50 feet from heavy-duty equipment; these effects would be transient at all the proposed project locations and attenuated (i.e., reduced in intensity) over distance; therefore, impacts on this criterion are less than significant.

Impact NS-3: Permanent increase in ambient noise levels in the project vicinity.
LESS THAN SIGNIFICANT

Operations and maintenance would require use of vehicles and aircraft. As mentioned before, noise from trucks, commuter vehicles, and other on-road equipment, which would mainly be along streets and access roads during operation and maintenance activities, would produce peak levels of approximately 88 dBA at 50 feet from the source (FTA 2006).The use of such vehicles would be occasional and would be similar to existing operations and maintenance procedures. The applicant would also use helicopters as part of annual maintenance inspections and occasional operational support or repairs in areas of difficult vehicular access. The proposed project would not involve additional sources of noise, such as transformers or other noise-generating permanent equipment for operations and maintenance.

Corona noise from upgraded subtransmission lines, as well as vehicle and air traffic noise associated with routine inspections and repairs could occur. The corona effect is the ionization of the air that occurs at the surface of the energized conductor and suspension hardware due to very high electric field strength at the surface of the metal during certain conditions. The corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy in

the form of local pressure changes that may result in audible noise or radio and television interference. The corona discharge generates audible noise during operation of transmission lines and substation equipment, and this noise is generally characterized as a crackling or hissing sound that may be accompanied by a 120-Hertz hum.

The amount of corona produced by a transmission line is a function of the voltage of the line, the diameter of the conductor, the elevation of the line above sea level, the condition of the conductor and hardware, and the local weather conditions. The noise is most noticeable during wet conductor conditions such as rain or fog; however, during fair weather, insects and dust on the conductors can also serve as sources of corona. Studies conducted by the Electrical Power Research Institute (EPRI) have reported that audible noise has not been a problem on lines operating below 200 kV, even if the line is built at a very high altitude and/or the hardware is improperly designed (EPRI 2007).

Corona noise associated with operation of the subtransmission line segments would be similar to existing corona noise in the area. Therefore, there would be no significant change in ambient noise levels in the project vicinity, resulting in a less than significant impact under this criterion.

Impact NS-4: Substantial temporary or periodic increase in ambient noise levels in the project vicinity.
LESS THAN SIGNIFICANT WITH MITIGATION

It is expected that noise levels from construction equipment and vehicle and helicopter use would result in temporary contributions to the ambient noise levels in the project vicinity during the overall 24-month construction period. As discussed in Impact NS-1, potential noise levels during construction may at times range between 75 to 80 dBA Leq for sensitive receptors located within 200 feet of the proposed project construction areas, including residences, schools, and places of worship. Most of the closest sensitive receptors would be exposed to a temporary increase in noise levels over 10 dBA above existing ambient levels (Table 4.11-3), which is above the 3- to 5-dBA range identified as threshold by all jurisdictions in the proposed project area. In particular, Santa Barbara County identifies an increase of 10 dBA as potentially significant when existing ambient noise levels are below 55 dBA.

The applicant would implement APM NV-1 thru APM NV-5 to reduce potential impacts at the closest sensitive receptors. The APMs would require the applicant to phase construction activities, use noise barriers, use equipment and vehicles with noise control features and notify local property owners prior to construction. Impacts from noise would remain to be potentially significant. The applicant would implement MM NV-1, which defines the requirements for additional noise reduction and control practices to ensure that noise levels from proposed construction activities would comply with applicable jurisdictional guidelines and reduce noise levels at the receptor's property line. Impacts from temporary or periodic increase in ambient noise levels in the project vicinity would be less than significant with mitigation.

4.11.4 Mitigation Measures

MM NV-1: Noise Reduction and Control Practices. The applicant will employ the following noise reduction and control practices during the proposed 66-kV subtransmission line, telecommunication route installation, and substation work to ensure that the respective jurisdiction's noise level threshold is not exceeded:

- Construction equipment, stationary or mobile, will be equipped with properly operating and maintained mufflers on engine exhausts and compressor components.
- The number and duration of construction equipment and vehicle idling on site will be limited, in accordance with APM AQ-2.
- Temporary acoustic barriers or sound curtains (e.g., removable blankets or curtains made of composite materials that block and absorb noise) will be used along the perimeter wall of work areas when construction activities occur within 200 feet of a sensitive receptor at any single location or within 1,600 feet of sensitive receptors in Ventura County for activities lasting more than 3 consecutive days at a single location. Noise barriers or sound curtains will be selected with a sound transmission class of 30 or greater, in accordance with American Society for Testing and Materials Test Method E90. The noise absorbing material will be 2-inches thick and have a Noise Reduction Coefficient rating of 0.85 or greater, based on American Society for Testing and Material Method C423. The barrier height will be designed to break the line of sight and provide at least a 5-dBA insertion loss between the noise source and the closest sensitive receptor.
- Helicopter use during 66-kV subtransmission and overhead telecommunication line installations will avoid flying below 1,000 feet over sensitive receptors, when feasible. If helicopter use is required below 1,000 feet over sensitive receptors, the applicant will notify affected parties within 48 hours prior to helicopter use.

4.12 Population and Housing

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to population and housing.

4.12.1 Environmental Setting

The setting for the proposed project includes the south coast of Santa Barbara County (SB Coast Area), which has been defined as the Electrical Needs Area (ENA) of the project. The ENA includes the incorporated cities of Goleta, Santa Barbara, and Carpinteria and the adjacent areas of unincorporated southern Santa Barbara County. In addition, a large portion of the proposed project would be located in Ventura County. The city of Ventura is the largest city near the eastern portion of the proposed project and is where Southern California Edison's (SCE's) Ventura Service Center is located. If the applicant's construction crews are used, they will be based at SCE's Ventura Service Center or one or more of the staging yards. The cities of Ojai and Santa Paula are also located in Ventura County within 7 miles of the proposed project. For this reason, Santa Barbara and Ventura Counties; the incorporated cities of Goleta, Santa Barbara, and Carpinteria in Santa Barbara County; and the cities of Ventura, Ojai, and Santa Paula in Ventura County represent the proposed project area for the analysis of population and housing.

Population

U.S. Census Year 2010 population counts and population projections for Santa Barbara County, Ventura County, and the cities of Carpinteria, Goleta, Ojai, Santa Barbara, Santa Paula, and Ventura are presented in Table 4.12-1. As indicated in Table 4.12-1, population is anticipated to grow between 2010 and 2040 within the overall proposed project area.

Table 4.12-1 Population in the Proposed Project Area

Location	2010	2020	2030/2035	2040	2010 to 2040 Change	
					Total	(%)
Santa Barbara County (Total)	423,895	445,955	507,564 (2035)	520,011	96,116	22.7
Ventura County (Total)	823,318	935,452	957,113 (2030)	995,375	172,057	20.9
City of Carpinteria	13,044	13,284	13,825 (2035)	13,893	849	6.5
City of Goleta	29,888	29,954	33,912 (2035)	34,588	4,700	15.7
City of Ojai	7,461	9,287	10,094 (2030)	10,901	3,440	46.1
City of Santa Barbara	88,410	87,813	94,876 (2035)	96,000	7,590	8.6
City of Santa Paula	29,321	36,502	40,576 (2030)	44,650	15,329	52.3
City of Ventura	106,433	118,073	127,836 (2030)	137,600	31,167	29.3

Sources: SBCAG 2012; U.S. Census Bureau 2010; Ventura Council of Governments 2008

Housing

Table 4.12-2 presents housing unit counts for 2010 and 2014. Vacancy rates for each jurisdiction are also presented in Table 4.12-2. Each jurisdiction within the proposed project area experienced an increase in housing except for the City of Santa Barbara and the County of Santa Barbara, which experienced a slight decrease. The City of Ventura and Santa Paula experienced the largest percentage increase in housing: 1.6 and 2.5 percent, respectively. The U.S. Census Year 2010 vacancy rates within the proposed project area ranged from5 to 12.3 percent. The California Department of Finance estimates that the 2010 vacancy rates for each jurisdiction within the proposed project area are holding steady in the year 2014 (California Department of Finance 2014).

Table 4.12-2 Housing Data for the Proposed Project Area, 2010 and 2014

Location	Housing Units		Change 2010 to 2014	
	2010	2014	Total	Percent (%)
Santa Barbara County (Total)	152,834	152,733 (6.9% vacant)	-101	-<1
Ventura County (Total)	281,695	284,489 (5.1% vacant)	2,794	1
City of Carpinteria	5,431	5,555 (12.3% vacant)	124	2
City of Goleta	11,473	11,508 (5% vacant)	35	<1
City of Ojai	3,382	3,401 (8% vacant)	19	<1
City of Santa Barbara	37,820	37,393 (6.3% vacant)	-427	-1
City of Santa Paula	8,749	8,973 (4.6% vacant)	224	2.5
City of Ventura	42,827	43,541 (5.6% vacant)	714	1.6

Source: California Department of Finance 2014

4.12.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern population and housing in the project area.

4.12.2.1 Federal

There are no federal regulations applicable to the proposed project with respect to population and housing.

4.12.2.2 State

There are no state regulations applicable to the proposed project with respect to population and housing.

4.12.2.3 Regional and Local

Government Code Sections 65580 and 65589.8

The Housing Element is one of the seven General Plan elements mandated by the State of California, as articulated in Section 65580 and 65589.8 of the Government Code. Each city and county is required to discuss how it will meet its fair share of the housing need in the state. The purpose of the Housing Element is to ensure that local governments adequately plan to meet the housing needs of all people within the community.

General Plan Housing Elements

The Housing Elements listed below were reviewed for the proposed project; however, no specific housing policies or programs were identified that were applicable to the proposed project.

- Santa Barbara County General Plan Housing Element Update 2009-2014 (adopted in 2010),
- Ventura County General Plan Housing Element (adopted in 2011),
- City of Carpinteria General Plan Housing Element (adopted in 2011),
- City of Goleta General Plan Housing Element (adopted in 2010),
- City of Ojai General Plan Housing Element (adopted in 2012),
- City of Santa Barbara General Plan Housing Element (adopted in 2011),
- City of Santa Paula General Plan Housing Element (adopted in 2012), and
- City of Ventura General Plan Housing Element (adopted in 2011 and amended 2012).

No specific policies or regulations were identified that were applicable to the proposed project.

4.12.3 Impact Analysis

4.12.3.1 Methodology and Significance Criteria

Population data from the Year 2010 U.S. Census were examined as well as projected population estimates, prepared by the Santa Barbara County and Ventura County Associations of Governments. In addition, the number of housing units in the project area, associated vacancy rates and information from the housing elements of the jurisdictions that would be traversed by components of the proposed project were reviewed. Potential impacts on population and housing levels were determined for both construction and operation of the proposed project according to the following significance criteria. The significance criteria were defined based on the checklist items in Appendix G of the CEQA Guidelines. According to the guidelines, the proposed project would cause a significant impact on population and housing resources if it would:

a) Induce substantial population growth in an area, either directly (e.g., proposing new homes and businesses) or indirectly (e.g., the extension of roads or other infrastructure);

b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere; or

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.12.3.2 Applicant Proposed Measures

There are no Applicant Proposed Measures associated with population and housing for the proposed project.

4.12.3.3 Environmental Impacts

Impact POP-1: Induce substantial population growth in an area either directly (e.g., proposing new homes and businesses) or indirectly (e.g., the extension of roads or other infrastructure).

LESS THAN SIGNIFICANT

The proposed project would not include the construction of new houses or businesses; therefore, the proposed project would not directly induce population growth in the area. In addition, the proposed project would be constructed to ensure the availability of safe and reliable electrical service and to help meet customer electrical demand within the Electrical Needs Area (ENA) during emergency conditions (Chapter 1, "Introduction").

While overall population in the project area is projected to increase by the year 2040 (Table 4.12-1), the proposed project is not expected to directly or indirectly contribute to this growth because it would not induce additional electrical consumption. Rather, the proposed project would meet emergency electrical demands of the Santa Barbara South Coast area, while enhancing operational flexibility. The proposed project would replace an existing subtransmission line. Although the proposed project includes access road improvements, these roads are mostly private roads and are off limits to the public.

The proposed project would not result in any additional, long-term staffing increases as the applicant's construction personnel would be largely drawn from existing populations within or near the project area. In addition, operation and maintenance activities would be similar to existing operations and maintenance activities. No additional long-term staffing is anticipated. Therefore, construction and operation of the proposed project would not induce population growth in the proposed project area and would have a less than significant impact under this criterion. Growth-inducing impacts are further discussed in Section 6.2, "Cumulative Impacts and Other CEQA Considerations."

Impact POP-2: Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere.

LESS THAN SIGNIFICANT

No housing units would be removed for construction or operation of the proposed project. The reconstruction of existing 66-kilovolt (kV) subtransmission facilities would primarily be located within existing utility rights-of-way (ROWs) between the existing Santa Clara Substation in Ventura County and the existing Carpinteria Substation in Santa Barbara County. In one location along Segment 3B, new ROW would be acquired; however, no existing housing units would be displaced and no new housing would be constructed elsewhere. The project components are located primarily in mountainous, sparsely populated areas of Santa Barbara and Ventura Counties. Segments 3A and 4 along with the Casitas and Carpinteria Substations are located partially within a residential land use designation, but the construction of the components would not displace existing housing units.

No permanent housing is required to support the applicant's construction workers because they would be largely drawn from existing populations within or near the project area. In the event that temporary worker accommodations were required for a portion of the project's up to 105 daily workers, Ventura and Santa Barbara counties both contain a number of hotel facilities, which would adequately support the proposed project, if required. The components of the proposed

project would be un-staffed, and only occasional maintenance or emergency repairs would be required during operations. No permanent housing would be required for maintenance staff, as operations would continue in a manner similar to that of existing operations. The substations associated with the proposed project function as remotely controlled substations. Station inspections are performed by substation operators when there is an indication of trouble; therefore, no permanent housing is needed for substation operators. As a result, construction and operation of the proposed project would have a less than significant impact under this criterion.

Impact POP-3: Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

NO IMPACT

As discussed above, under IMPACT POP-2, no housing units would be removed for construction or operation of the proposed project. As a result, no residents within the proposed project area would be displaced, necessitating the construction of replacement housing elsewhere. Construction and operation of the proposed project would have a less than significant impact under this criterion.

4.12.4 Mitigation Measures

There are no mitigation measures applicable to population and housing.

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4.13 Public Services and Utilities

This section describes the environmental and regulatory settings for public services and utilities systems in the proposed project area. This section also examines how construction and operation of the Santa Barbara County Reliability Project (proposed project) would alter the existing public services and utilities systems. While impacts on fire and police protection services are discussed in this section, see Section 4.8, "Hazards and Hazardous Materials" for the discussion of emergency response plans and impacts related to fire hazards.

4.13.1 Environmental Setting

Project construction and operation at the Getty, Goleta, Ortega, and Santa Barbara Substations would not impact existing public services and utilities, as all work would occur within existing facilities and would operate in a manner similar to existing conditions. Therefore, these substations are not discussed further in this section. The proposed project would be located in unincorporated Santa Barbara and Ventura Counties, the City of Carpinteria, and the Los Padres National Forest. Public services and utilities in the project area are described in detail below.

4.13.1.1 Public Services

Fire Protection Services

Table 4.13-1 lists fire protection services in the project area.

Table 4.13-1 Fire Stations Serving the Proposed Project Area

Name and Location	Jurisdiction	Distance from Project Components
Ojai Ranger District 1190 E. Ojai Avenue Ojai, CA	Wildland fires within the jurisdiction of the Los Padres National Forest	12 miles northeast of project components within the Los Padres National Forest jurisdiction
Santa Barbara County Fire Department Station 15 2491 Foothill Road Santa Barbara, CA	Unincorporated areas in Santa Barbara County and multiple municipalities (fire protection and paramedic services)	11.5 miles west of the Carpinteria Substation
Ventura County Fire Protection District Station 26 12391 W. Telegraph Road Santa Paula, CA	Unincorporated Ventura County, several municipalities, and an 860-square-mile area of forest reserve	3 miles east-northeast of the Santa Clara Substation
Ventura County Fire Protection District Station 23 5 Kunkle Street Oak View, CA	Unincorporated Ventura County, several municipalities, and an 860-square-mile area of forest reserve	2.25 miles north of the Casitas Substation
Carpinteria-Summerland Fire Protection District 911 Walnut Avenue Carpinteria, CA	Greater Carpinteria area	Less than 1 mile from the Carpinteria Substation

Source: SBCFD 2013, Ventura County Fire Department 2009, Carpinteria-Summerland Fire Protection District 2013

Police Protection and Law Enforcement Services

Table 4.13-2 lists police protection and law enforcement services in the project area.

Table 4.13-2 Police and Law Enforcement Services in the Proposed Project Area

Name and Location	Jurisdiction	Distance from Project Components
California Highway Patrol 6465 Calle Real Goleta, CA	Traffic control, accident investigation, and other law enforcement services along major highways in the project area, including State Routes 1, 33, and 192.	20 miles west of the Carpinteria Substation
California Highway Patrol 4656 Valentine Road Ventura, CA	Traffic control, accident investigation, and other law enforcement services along major highways in the project area, including State Routes 1, 33, and 192.	6 miles southeast of the Santa Clara Substation
Santa Barbara County Sheriff's Department 5775 Carpinteria Avenue Carpinteria, CA	Unincorporated Santa Barbara County	1.4 miles from the Carpinteria Substation
Ventura County Sheriff's Office, Headquarters 800 South Victoria Avenue Ventura, CA	Unincorporated Ventura County	2.6 miles from the Santa Clara Substation
Ventura County Sheriff's Office, Ojai Patrol Office 402 South Ventura Street Ojai, CA	Unincorporated Ventura County and the City of Ojai	6.5 miles north-northeast of the Casitas Substation

Sources: CHP n.d., Santa Barbara County Sheriff's Office 2012, Ventura County Sheriff's Office 2013a and 2013b

Medical Facilities

The nearest medical facilities to the proposed project components are listed in Table 4.13-3.

Table 4.13-3 Medical Facilities in the Proposed Project Area

Name and Location	Distance from Project Components
Community Memorial Hospital 147 North Brent Street Ventura, CA	4.5 miles west-southwest of Santa Clara Substation
Santa Barbara Cottage Hospital 400 West Pueblo Santa Barbara, CA	11 miles from the Carpinteria Substation

Sources: Community Memorial Hospital 2013, Cottage Health System 2013

Schools and Libraries

Schools

Three public schools and one private school are located within 0.25 miles of the proposed project components. Table 4.13-4 lists the schools within 0.25 miles of the proposed project.

Table 4.13-4 Schools within 0.25 Miles[1] of Components of the Proposed Project

School	Address	Approximate Distance/Direction from Nearest Project Component
Carpinteria Unified School District		
Carpinteria High School	4810 Foothill Road, Carpinteria, CA 93013	Adjacent to Carpinteria Substation and Segment 4
Rincon High School	4698 Foothill Road, Carpinteria, CA 93013	0.25 miles west of Segment 4
Canalino Elementary School	1480 Linden Ave., Carpinteria, CA 93013	0.22 miles south of Segment 3a
Private		
Howard Carden School	5315 Foothill Road Carpinteria, CA 93013	0.03 miles south of Segment 3a

Sources: Carpinteria Unified School District 2013a, b, n.d.; Howard School 2013; Foothill Technology High School 2013; Ventura Unified School District 2013

Note: [1]Additional schools located within 1 mile of the project are listed in Table 4.11-2.

Libraries

The nearest libraries to the proposed project area are listed in Table 4.13.5.

Table 4.13-5 Libraries Nearest to the Proposed Project

Library	Address	Approximate Distance/Direction from Nearest Project Component
Santa Barbara Public Library Carpinteria Branch	5141 Carpinteria Ave Carpinteria, CA	0.8 miles south of the Carpinteria Substation
Ventura County Library Saticoy Library	11426 Violeta Street Ventura, CA	2.5 miles southeast of the Santa Clara Substation
Ventura County Library Oak View Library	555 Mahoney Ave Oak View, CA	2.5 miles north of the Casitas Substation

Sources: Santa Barbara Public Library System 2007, Ventura County Library 2013

Parks

Numerous public and private parks, beaches, reserves, and recreation areas are located in the vicinity of the proposed project. For further discussion of parks and recreational facilities located in the proposed project area, see Section 4.14, "Recreation."

4.13.1.2 Utilities Systems

Water Supply

The Carpinteria Valley Water District provides potable water to all residential, commercial, and agricultural customers in the southern coastal portion of Santa Barbara County and includes the City of Carpinteria (CVWD 2013). The district has an annual surplus water supply of more than 150 acre-feet and requires that this surplus water be used within its district (King pers. comm. 2013). The Casitas Municipal Water District (CMWD) serves the western portion of unincorporated Ventura County. CMWD's water demand projection for 2015 is 17,354 acre-feet/year. CMWD's planned water supply for 2015 is 20,840 acre-feet/year (CMWD 2011).

The El Estero Reclamation Facility operated by the City of Santa Barbara is currently upgrading their treatment plant, which is anticipated to be complete in 2015. The City of Santa Barbara estimates that approximately 300 ac-feet/year is available for use within the City of Santa Barbara boundaries (City of Santa Barbara 2014).

The Camarillo Wastewater Treatment Plant operated by the City of Camarillo currently produces reclaimed water. The City of Camarillo is currently building new pipeline infrastructure. The first phase of pipeline construction is anticipated to be complete by the end of 2014. The second phase of construction is anticipated to be completed mid-2015. Reclaimed water is only available for use within the City of Camarillo boundaries (McGovern pers. comm. 2014).

Wastewater

The Carpinteria Sanitary District, Ojai Valley Sanitation District, and County of Ventura Waste and Sanitation Department provide wastewater conveyance and treatment services to the proposed project area. In some unincorporated areas of Santa Barbara and Ventura Counties surrounding the project area, septic systems are also used.

Stormwater

Stormwater flows in the proposed project area are conveyed by facilities developed and maintained by the Santa Barbara County Flood Control District, the City of Carpinteria Public Works Department (Watershed Management Program), and the Watershed Protection District of the Ventura County Public Works Agency (City of Capinteria n.d; County of Santa Barbara 2010; County of Ventura Watershed Protection District 2013;).

Solid Waste

Table 4.13-6 summarizes the total and remaining capacities of solid waste facilities serving the proposed project area.

Table 4.13-6 Solid Waste Facilities Serving the Proposed Project Area

Solid Waste Landfill	Address	Approximate Distance from Project	Permitted Max Disposal (tons/day)	Total Remaining Capacity (million cubic yards)	Scheduled Closure Date
Tajiguas Sanitary Landfill	14470 Calle Real Goleta, CA 93117	35 miles west of Carpinteria Substation	1,500	6.6	1/01/2023
Toland Road Landfill[1]	3500 North Toland Road Santa Paula, CA 93060	13 miles northeast of Santa Clara Substation	1,500	22	05/31/2027
Simi Valley Landfill	2801 Madera Road Simi Valley, CA 93065	23 miles east of the Santa Clara Substation	9,250	119.6	01/31/2052

Source: CalRecycle 2013a,b.

Note:

[1] This landfill facility is approved by the Ventura Regional Sanitation District (Permit #56-AA-0005) for the disposal of treated wood waste, such as the types of utility wood waste (wood poles and cross arms) that would require disposal for the proposed project.

4.13.2 Regulatory Setting

This subsection summarizes federal, state, and local laws, regulations, and standards that govern public services and utilities in the project area.

4.13.2.1 Federal

Clean Water Act

The Clean Water Act of 1972 (33 United States Code §1251 et seq.) requires states to set standards to protect water quality, including the regulation of stormwater and wastewater discharge during construction and operation of a facility. This includes the creation of a system that requires states to establish discharge standards specific to water bodies (National Pollutant Discharge Elimination System [NPDES]), which regulates stormwater discharge from construction sites through the implementation of a Storm Water Pollution Prevention Plan (SWPPP). See Section 4.9, "Hydrology and Water Quality," for further information.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act of 1976 (RCRA) (42 United States Code §6901 et seq.) establishes requirements for the management of solid waste. RCRA establishes provisions for the design and operation of solid waste landfills, but authorizes states to carry out many functions of RCRA through their own waste programs and laws. The U.S. Environmental Protection Agency has promulgated regulations to implement the provisions of RCRA (40 Code of Federal Regulations Parts 239–282).

4.13.2.2 State

California Porter-Cologne Water Quality Act

This California state law provides a comprehensive water quality management system for the protection of California waters. Porter-Cologne designated the State Water Resources Control Board (SWRCB) as the ultimate authority over State water rights and water quality policy and established nine Regional Water Quality Control Boards (RWQCBs) to oversee water quality on a day-to-day basis at the local/ regional level. The boards have the responsibility of granting NPDES permits for stormwater runoff from construction sites. The Central Coast RWQCB and the Los Angeles RWQCB serve the proposed project area.

California Water Law and Permitting

California's water law (California Code of Regulations Title 23) is based on four doctrines: riparian, prior appropriation, groundwater, and pueblo rights. Riparian rights result from the ownership of land bordering a surface water source. Appropriative rights are acquired by putting surface water to beneficial use. Subterranean streams and underflow of surface waters are subject to the laws of surface waters and regulated by the SWRCB and its RWQCBs. Underground water not flowing in a subterranean stream, such as water percolating through a groundwater basin, is not subject to the permitting authority of the SWRCB. The RWQCBs issue permits and licenses for appropriation from surface and underground streams. The evaluation of applications considers the relative benefits derived from the beneficial uses, possible water pollution, and water quality.

Emergency Regulations Related to California Drought Conditions

On January 17, 2014, Governor Brown issued an Executive Order declaring a State of Emergency due to current drought conditions in California. The January 17th Executive Order called on the Department of Water Resources to coordinate with local water districts on a campaign urging Californians to reduce water usage by 20 percent (CA Office of the Governor 2014a).

On April 24, 2014, Governor Brown issued another Executive Order urging that immediate action be taken "to mitigate the effects of the drought conditions upon the people and property within the State of California." The April 24th Executive Order also directed the State Water Resources Control Board to "adopt and implement emergency regulations pursuant to Water Code section 1058.5, as it deems necessary to prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water, to promote water recycling or water conservation, and to require curtailment of diversions when water is not available under the diverter's priority of right" (CA Office of the Governor 2014b).

On July 6, 2014, the State Water Resources Control Board responded to the Governor's April 24th Executive Order by adopting Emergency Regulations that require urban water suppliers to promote water conservation, prepare water shortage contingency plans, and submit monthly monitoring reports, among other measures (SWRCB 2014).

California Integrated Waste Management Act (Assembly Bill 939) and Assembly Bill 341

The California Integrated Waste Management Act of 1989 (Public Resource Code 40000 et seq.; Assembly Bill 939) requires all county and local governments to adopt a Source Reduction and Recycling Element to identify ways to reduce the amount of solid waste sent to landfills. This law set reduction targets of 25 percent by 1995 and 50 percent by the year 2000. Assembly Bill 341, signed into law in 2011, established a new statewide target of 75 percent disposal reduction by the year 2020.

Assembly Bill 341 requires the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling, which was not required under the previous version of the Integrated Waste Management Act. The new Mandatory Commercial Recycling Regulation was approved at the CalRecycle monthly public meeting in January 2012. On and after July 1, 2012, businesses are required to recycle. The Integrated Waste Management Act, as amended by Assembly Bill 341, however, does not mandate a diversion percentage for businesses. It only requires that businesses implement a commercial recycling program. The applicant estimates that 7,213 tons of solid waste would be disposed of during construction of the proposed project. The disposal of hazardous waste is discussed in Section 4.8, "Hazards and Hazardous Materials."

Underground Service Alert: Protection of Underground Infrastructure

Pursuant to California Government Code Sections 4216–4216.9, the appropriate regional notification center must be contacted at least two working days prior to any excavation activities. Subsequent to this notification, underground infrastructure operators are notified and required to locate and field-mark the approximate location and number of subsurface installations that may be affected. The excavator is then required to determine the exact location of subsurface installations that may be affected by excavating with hand tools within the area of the approximate location of subsurface installations, as determined by field marking. Pursuant to Section 4216, the applicant

would contact the Underground Service Alert of Southern California prior to conducting excavation activities for each component of the proposed project that requires subsurface installation.

California Public Utilities Commission General Order 95

The California Public Utilities Commission's General Order 95, Rules for Overhead Electric Line Construction, describes aspects of design, construction, operation, and maintenance of electrical power lines and fire safety hazards.

4.13.2.3 Regional and Local

Central Coast and Los Angeles Regional Water Quality Control Boards

The Central Coast RWQCB manages water quality for Santa Barbara County. The Los Angeles RWQCB has jurisdiction to manage water quality for the majority of Los Angeles County and Ventura County. Both of these RWQCBs have jurisdiction for areas which are traversed by components of the proposed project. The Central Coast and Los Angeles RWQCBs are responsible for the following activities in areas under their jurisdiction: setting standards, issuing waste discharge requirements, and determining compliance. The RWQCBs monitor and set standards for water quality under several programs, including stormwater, wastewater treatment, and wetlands protection.

Because construction of the proposed project would disturb a surface area greater than 1 acre, the applicant would be required to obtain a NPDES permit from the applicable RWQCB. To acquire this permit, the applicant would prepare a SWPPP that would include information about the proposed project and monitoring and reporting procedures, and would implement construction measures such as dewatering procedures, stormwater runoff quality control measures, and concrete waste management, as necessary. The SWPPP would be based on final engineering design and would include all components of the proposed project.

County of Santa Barbara Land Use and Development Code

Section 35.30.100 of the County of Santa Barbara Land Use and Development Code states:

> *Issuance of a Coastal Development Permit (Section 35.82.050) or a Land Use Permit (Section 35.82.110) or Zoning Clearance (Section 35.82.210) shall require that the review authority first find, based on information provided by environmental documents, staff analysis, and the applicant, that adequate public or private services and resources (e.g., water, sewer, roads) are available to serve a proposed development.*

County of Santa Barbara Coastal Zoning Ordinance

The County of Santa Barbara's Local Coastal Program administers the County's Coastal Land Use Plan, which is implemented by the Coastal Zoning Ordinance. The Coastal Zoning Ordinance is applicable to developments within the Coastal Zone in the County. Section 35-60.5 of the Coastal Zoning Ordinance provides: "Prior to issuance of a Coastal Development Permit, the County shall make the finding, based on information provided by environmental documents, staff analysis, and/or the applicant, that adequate public or private services and resources (i.e., water, sewer, roads, etc.) are available to serve the proposed development."

Ventura County General Plan

The following goals, objectives and policies established in the County of Ventura General Plan-Goals Policies and Programs, are applicable to the proposed project (Ventura County 2011):

Law Enforcement and Emergency Services Goals and policies:

- **Goal 1:** Provide for the protection of the public through effective law enforcement and emergency services.
- **Goal 2:** Ensure that discretionary development provides adequate private security for the prevention of local crime.
- **Policy 1:** The Sheriff's Department shall continue to review discretionary permits to ensure that an adequate level of law enforcement can be provided.
- **Policy 2:** Discretionary development shall be conditioned to provide adequate site security during the construction phase (e.g., licensed security guard and/or fencing around the construction site, and all construction equipment, tools, and appliances to be properly secured and serial numbers recorded for identification purposes).

Fire Protection Goal and Policy:

- **Goal 1:** Strive to reduce the loss of life and property by providing effective fire prevention, suppression, and rescue services and facilities.
- **Policy 1:** Discretionary development shall be permitted only if adequate water supply, access, and response time for fire protection can be made available.

City of Carpinteria General Plan and Local Coastal Program

The following objectives and policies from Section 3.13 (Public Facilities and Services) of the City of Carpinteria General Plan and Local Coastal Program are applicable to the proposed project:

- **Objective PF-2:** Ensure adequate service systems for the transmission, treatment and disposal of sewage and wastewater generated within this area as well as the disposal of trash, green waste and recyclable material.
- **Objective PF-3:** The City shall strive to maintain the best possible police and fire safety services for the community.
- **Policy PF-2d:** The City shall support source reduction and recycling efforts through the use of recycled products in all City departments, whenever economically and technically feasible.
- **Policy PF-3a:** The City shall endeavor to monitor relevant statistics and enforcement criteria to assure adequate police service.
- **Policy PF-3c:** The City shall cooperate with the fire district for the purpose of determining district needs and to provide development mitigations as indicated by the study.
- **Policy PF-3e:** The City will require that proposed major projects demonstrate adequate fire and police response times and that the stations serving the Project have adequate staff and equipment available to serve increased demand.

- **Objective PF-5:** To provide a high quality and broad range of public services, facilities, and utilities to meet the needs of all present and future residents of the Carpinteria Planning Area.
- **Policy PF-5a:** The City will strive to maintain adequate library service for the community of Carpinteria (City of Carpinteria 2003).

4.13.3 Impact Analysis

4.13.3.1 Methodology and Significance Criteria

The following impact analysis is based on significance criteria included in Appendix G of the CEQA Guidelines. An impact is considered significant if the project would:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following: (1) fire protection, (2) police protection, (3) schools, (4) parks, or (5) other public facilities;

b) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

c) Not have sufficient water supplies available to serve the project from existing entitlements and resources or require new or expanded entitlements;

d) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs; or

e) Not comply with federal, state, or local statutes and regulations related to solid waste.

Appendix G of the CEQA Guidelines also includes the following checklist items – the proposed project would cause a significant impact on public services and utilities if it would:

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Exceed wastewater treatment requirements of the applicable RWQCB;
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; and
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The proposed project would not require new water treatment facilities or the expansion of existing facilities because the majority of water would be used for dust suppression. In addition, the proposed project would have no impact on regional or municipal sanitary wastewater treatment facilities because it would generate nominal volumes of wastewater associated with worker use of portable toilets during the 24-month project construction period. Further, the project would not exceed wastewater treatment requirements established by the Central Coast or Los Angeles RWQCBs due to the nominal amount of wastewater generated, and no construction of new, or

alteration of existing, wastewater treatment facilities would be required to serve the project. Therefore, these checklist items are not applied as criteria in the analysis of environmental impacts related to public services and utilities.

Santa Barbara County Environmental Thresholds and Guidelines Manual

In order to approve a Coastal Development Permit for activities within the California Coastal Zone, additional significance criteria were defined based on the Santa Barbara County Environmental Thresholds and Guidelines Manual (County of Santa Barbara 2008). The project would cause a significant impact from solid waste if:

1. Any construction, demolition, or remodeling project of a commercial, industrial or residential development that is projected to create more than 350 tons of construction and demolition debris is considered to have a significant impact on public services.

Santa Barbara County Environmental Thresholds and Guidelines Manual also includes the following thresholds of significance. The proposed project would cause a significant impact from solid waste if:

- a) If operation of a project is projected to create more than 196 tons of solid waste per year, then the project would have significant project-specific impacts.

  b) If operation of a project is projected to create more than 40 tons of solid waste per year, then the project would have significant cumulative impacts.

Operation and maintenance activities of the proposed project would be similar to those associated with the existing 66-kV subtransmission and substations and would not create a new stream of solid waste. Therefore, these operational thresholds are not applied as criteria in the analysis of environmental impacts related to solid waste.

4.13.3.2 Applicant Proposed Measures

There are no Applicant Proposed Measures associated with public services and utilities for the proposed project.

4.13.3.3 Environmental Impacts

Impact PS-1: Result in substantial adverse physical impacts on governmental facilities or from the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following: (1) fire protection and emergency response, (2) police protection, (3) schools, (4) parks, or (5) other public facilities.

1) Fire Protection and Emergency Response.
LESS THAN SIGNIFICANT WITH MITIGATION

The proposed project would be constructed within areas designated as High or Very High Fire Hazard Severity Zones (CAL FIRE 2007; see Figure 4.8-1 in Section 4.8, "Hazards and Hazardous Materials"). These areas are considered to have a high fire risk due to flammable native vegetation, dry weather conditions, and high winds. Construction activities could increase the risk of fire caused by vehicle, helicopter, or construction equipment use or electrical discharge. The applicant would implement Mitigation measure (MM) HZ-2, as described in Section 4.8," Hazards and Hazardous Materials," to reduce fire risk and unnecessary burden on local fire protection providers. These measures would require the applicant to prepare a Fire Control and Emergency Response Plan, implement fire control, and establish emergency response measures.

Project construction may temporarily increase the demand for emergency response services from construction-related injuries. The proposed project would not introduce new, permanent populations to the area that would require the construction of new, or alteration of existing, governmental facilities associated with additional fire protection or emergency medical services. Fire and emergency response providers in the area are adequate and available to serve the project in the event of a fire or medical emergency. No short-term provisions of additional fire facilities, equipment, or emergency response services would be required for the project, and rehabilitation of several existing access roads in the area could improve response times for emergency vehicles in the event of a fire or accident. Therefore, construction of the proposed project would result in a less-than-significant impact on fire and emergency services under this criterion.

Operation and maintenance activities would be similar to those associated with the existing 66-kV subtransmission and substations and, therefore, would not impact local or regional fire protection or emergency services. As part of the proposed project, several existing access roads in the project area would be reestablished, which could result in a beneficial impact related to fire and ambulatory service providers' response times along the more remote sections of the project.

2) Police Protection.
LESS THAN SIGNIFICANT

Construction of the proposed project may require the assistance of police protection or law enforcement agencies in Santa Barbara and Ventura Counties; however, the majority of the work would take place in sparsely populated areas along remote access roads. Theft or vandalism of the applicant's property (e.g., equipment, materials) could occur at the proposed project sites during construction or operation, requiring a response by local law enforcement, but construction personnel would secure unattended equipment at the job sites to minimize the potential for theft and vandalism. Therefore, the likelihood of such occurrences would be relatively low, and there would be no increase in police services required during construction. Operation and maintenance

activities would be similar to those associated with the existing 66-kV subtransmission and substations and, therefore, would not impact police services.

3) Schools, 4) Parks and 5) Other Public Facilities.
NO IMPACT

As further discussed in Section 4.12, "Population and Housing," the applicant would use its existing regional labor forces for construction, so the proposed project would not introduce new permanent populations to the area during construction or operation; thus, the project would not impact the performance objectives of local schools, libraries, or other public service facilities, necessitating the construction of new, or alteration of existing, public facilities for these uses. For impacts on recreation associated with construction of the proposed project, see Section 4.14, "Recreation."

Impact PS-2: Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
LESS THAN SIGNIFICANT

Construction of the proposed project includes installation of new, or repair of existing, drainage structures such as wet crossings, water bars, overside drains, and pipe culverts along the 120 miles of access roads to allow for construction traffic usage, as well as to prevent road damage due to uncontrolled water flow. Additional drainage features would be installed as described in Chapter 2 and as required by the SWPPP.

Although stormwater runoff during construction and operation of the proposed project requires the construction of new on-site stormwater drainage facilities, the applicant would construct such facilities in accordance with the NPDES and grading permits, as directed by the Central Coast and Los Angeles RWQCB, and applicable local flood control and watershed management agencies. No new public stormwater drainage facilities or expansion of existing public facilities would be required. Therefore, impacts under this criterion would be less than significant.

Impacts associated with stormwater are also discussed in Section 4.9, "Hydrology and Water Quality."

Impact PS-3: Insufficient water supplies available to serve the project from existing entitlements and resources or new or expanded entitlements required.
LESS THAN SIGNIFICANT WITH MITIGATION

In total, the applicant would use up to 393 acre-feet of water for construction of the proposed project. This relatively high volume of water would primarily be required for dust suppression and would be supplied by local water agencies. No new wells would be drilled.

Although the agencies identified by the applicant appear to have sufficient water supplies available for the applicant's construction needs at the time of this document's publication, due to the rapidly evolving drought conditions in the State of California, it is unknown whether these districts will have sufficient water supplies available at the time of construction. Therefore, MM PS-1 is required. With the implementation of MM PS-1, which requires the preparation of a Water Efficiency Plan and the use of reclaimed water to the extent feasible, impacts would be reduced to less than significant.

Operation and maintenance activities would be similar to those associated with the existing 66-kV subtransmission and substations and, therefore, would not result in insufficient water supply from existing entitlements.

Impact PS-4: Served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.
LESS THAN SIGNIFICANT

The proposed project would generate approximately 7,213 tons of solid waste during construction. The applicant would recycle and salvage construction waste materials, where feasible, to comply with Assembly Bill 939 and local Source Reduction and Recycling Elements. The applicant would dispose of the remaining non-recyclable, non-hazardous construction debris as follows: municipal solid waste and waste consisting of bulk organic materials (e.g., vegetative material, cardboard packing, and soil) would be transported to sanitary landfills, and inert waste (concrete, asphalt, and scrap metal fragments) would be hauled to unclassified landfills serving the project area. Utility wood waste (poles and cross arms) removed during construction of the project would be refurbished or disposed of at the Toland Road Landfill, which is a solid waste facility approved by the Ventura Regional Sanitation District for the disposal of treated wood waste.

Area landfills located within 35 miles of the components of the proposed project would be available and have sufficient remaining permitted capacity to accept the amount of non-hazardous solid waste estimated to be generated by construction and operation of the proposed project (see Subsection 4.13.1.2). For more extensive maintenance activities that might be required (e.g., electrical structure replacement due to accidents or natural disasters), local waste management facilities are anticipated to be open and have adequate capacity to accept solid waste that could not be recycled or salvaged. Additionally, Class I landfills with sufficient capacity to accept the proposed project's minor quantities of hazardous waste materials would be available. Therefore, impacts under this criterion would be less than significant.

Operation and maintenance activities would be similar to those associated with the existing 66-kV subtransmission and substations and, therefore, would not create the need for new solid waste facilities.

Impact PS-5: Noncompliance with federal, state, or local statutes and regulations related to solid waste.
LESS THAN SIGNIFICANT

Construction and operation of the proposed project would require limited use of hazardous materials (e.g., fuels, lubricants, and cleaning solvents). The applicant would dispose of hazardous waste at an appropriately licensed facility. Utility wood waste (poles and cross arms) removed during construction of the project would be refurbished or disposed of at the Simi Valley Landfill, which is a solid waste facility approved by the Los Angeles RWQCB for the disposal of treated wood waste. Other hazardous waste (e.g., transformer oil) generated by construction and operation of the proposed project and its disposal are further discussed in Section 4.8, "Hazards and Hazardous Materials."

Construction of the proposed project would also result in the generation of various non-hazardous solid wastes (e.g., wood, soil, vegetation, and sanitary waste). Much of the non-hazardous solid waste generated would be salvaged or recycled by the applicant, including steel (e.g., electrical

towers, support beams, nuts, bolts, and washers); conductor wire; and other hardware (e.g., shackles, clevises, yoke plates, links, or other connectors used to support the conductors).

The local jurisdictions in the proposed project area have each adopted a Source Reduction and Recycling Element to document their waste diversion goals, recycling programs, and strategies for achieving solid waste diversion goals in compliance with Assembly Bill 939 (California Integrated Waste Management Act) standards (City of Carpinteria 2012; County of Ventura Public Works Agency 2013). The applicant would comply with Assembly Bill 939 and local Source Reduction and Recycling Elements.

Impact PS-6: Exceed Santa Barbara County's solid waste thresholds of 350 tons of construction and demolition debris.
LESS THAN SIGNIFICANT WITH MITIGATION

The proposed project would generate approximately 7,213 tons of solid waste during construction. The applicant would recycle and salvage construction waste materials, where feasible, to comply with Assembly Bill 939 and local Source Reduction and Recycling Elements.

The Santa Barbara County threshold is applicable to landfills operated by the County. Tajiguas Landfill is the only Santa Barbara County operated landfill identified by the applicant as a solid waste facility that would serve the proposed project. Disposal of more than 350 tons of solid waste during construction and restoration to the Tajiaguas Landfill would be a significant impact. MM PS-2 would require the applicant to prepare a Solid Waste Management Plan to outline how solid waste will be sorted, measured, and recorded to ensure that no more than 350 tons of solid waste is delivered to the landfills operated by Santa Barbara County. Implementation of MM PS-2 would reduce impacts from solid waste to a less than significant impact.

4.13.4 Mitigation Measures

MM HZ-2 is described in Section 4.8, "Hazards and Hazardous Materials."

MM PS-1: Water Efficiency Plan. The applicant will make reasonable attempts to reduce overall water use and will reduce potable water use by at least 20 percent during drought conditions as declared by the State of California. The applicant will be required to research reclaimed water sources and acquire reclaimed water to the greatest extent practicable. The applicant will prepare and submit a Water Efficiency Plan to the CPUC for review and approval at least 60 days prior to construction. The Water Efficiency Plan will detail the applicant's water efficiency measures, including the use of reclaimed water, palliatives, alternative construction methods, or other measures proposed by the applicant. The Water Efficiency Plan will detail the applicant's attempts to secure reclaimed water. In the event that a sufficient supply of reclaimed water cannot be reasonably obtained, the applicant will provide a well-documented justification for any use of potable water to be used for construction activities. If, at any time during construction, the State Water Resources Control Board rescinds their Emergency Regulations (Resolution No. 2014-0038) due to a cessation of drought conditions in the State, the applicant may request that the CPUC rescind this mitigation measure. Alternatively, the applicant will need to revise their Water Efficiency Plan to remain in compliance with future adopted SWRCB regulations regarding water use during drought conditions.

MM PS-2: Solid Waste Management Plan. The applicant will prepare and submit a Solid Waste Management Plan to the CPUC and the County of Santa Barbara for review and approval prior to the start of construction. The Solid Waste Management Plan will outline how the applicant will sort, measure, and record the disposal of solid waste to ensure that no more than 350 tons of solid waste is delivered to a Santa Barbara County operated solid waste disposal facility. Measures in the plan will include, but will not be limited to:

- Provision of space and/or bins for appropriate storage of recyclable materials on site;
- Establishment of a recyclable material pickup area; and
- Development of a recordation system that details the amount of solid waste created, solid waste recycled, and solid waste delivered to a Santa Barbara County operated solid waste disposal facility.

The plan will also detail reporting requirements to the CPUC and Santa Barbara County, including biannual progress reports and notification of when the project's capacity at Santa Barbara County operated solid waste disposal facilities is reached.

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4.14 Recreation

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the Santa Barbara County Reliability Project (proposed project) with respect to recreation. Impacts from noise and aesthetics are discussed in Section 4.1, "Aesthetics" and Section 4.11, "Noise."

4.14.1 Environmental Setting

The Los Padres National Forest is generally located north of the proposed project and features mountains, streams, rivers, and beaches, which provides opportunities for many recreation activities. Two Segment 4 structures that would be replaced as part of the proposed project, as well as several access road improvements, are located in the Los Padres National Forest. Segment 4 traverses an area in the Los Padres National Forest designated for non-motorized, day-use recreation activities, including hiking, biking, horseback riding, rock climbing, and wildlife viewing (USFS 2005).

The City of Carpinteria Planning Commission approved a conditional use permit and coastal development permit for construction of the Franklin Trail on May 6, 2013, and opened to the public in Fall 2013. The Franklin Trail begins south of Carpinteria High School and continues along the west side of the high school before climbing the western slope of the Santa Ynez Mountains. The multipurpose trail is used by hikers, mountain bikers, and equestrians. Approximately 4 miles of the 7.5-mile-long trail is located on an easement shared with and maintained by Southern California Edison (SCE) as an access road (Santa Barbara County 2012).

Table 4.14-1 identifies recreational facilities within 1 mile of the proposed project.

Table 4.14-1 Recreation Facilities Within 1 Mile of the Proposed Project

Recreation Facility	Closest Component of the Proposed Project	Jurisdiction	Approximate Distance from Closest Component of the Proposed Project
Woodside Linear Park	Santa Clara Substation	City of Ventura	0.9 miles east
Foster Park	Segments 1,2 and Casitas Substation	Ventura County	0.3 miles south
Lake Casitas	Segment 2	Casitas Municipal Water District	< 0.1 mile north
Ojai Valley Trail	Segment 2	Ventura County	Project Overlaps
Lions Park	Segment 3A	Private	< 0.1 mile south
El Carro Park	Segment 3A	City of Carpinteria	< 0.1 mile south
Rincon Beach Park	Segment 3A	City of Carpinteria	1.0 miles south
Monte Vista Park	Segment 3A	City of Carpinteria	0.6 miles south
Carpinteria Bluffs Open Space	Segment 3A	City of Carpinteria	1.0 mile south
Carpinteria State Beach	Segment 3A	City of Carpinteria	0.9 miles south
Carpinteria Salt Marsh Reserve	Segment 3A	City of Carpinteria	0.9 miles southwest

Table 4.14-1 Recreation Facilities Within 1 Mile of the Proposed Project

Recreation Facility	Closest Component of the Proposed Project	Jurisdiction	Approximate Distance from Closest Component of the Proposed Project
Heath Ranch Park	Segment 3A	City of Carpinteria	0.4 miles west
Memorial Park	Segment 3A	City of Carpinteria	0.6 miles southwest
Salt Marsh Nature Park	Segment 3A	City of Carpinteria	0.9 miles southwest
Los Padres National Forest	Segment 4	US Forest Service	Project Overlaps
Franklin Trail	Segment 4	City of Carpinteria/ County of Santa Barbara	Project Overlaps

Sources: Santa Barbara County 2009, 2011; City of Carpinteria 2003; USFS 2005; City of Ventura 2005; Ventura County 2011

4.14.2 Regulatory Setting

4.14.2.1 Federal

Los Padres National Forest

The Los Padres National Forest Land Management Plan utilizes the recreation opportunity spectrum to identify appropriate types of recreation activities. The forest is divided into five classifications: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, and rural. Segment 4 crosses the semi-primitive motorized designation, which generally allows limited forms motorized recreation and social interaction. In addition, the land use plan divides the national forest into land use zones that identify specific management strategies for each area. Segment 4 crosses the Back Country (Motorized Use Restricted) land use zone, which prohibits off-highway vehicle or motorized use. Motorized use is limited to administrative uses or authorized special uses within this zone. Recreation activities in this area focus on day-use, including hiking, biking, horseback riding, rock climbing, and wildlife viewing (USFS 2005).

4.14.2.2 State

There are no state plans that apply to the analysis of impacts on recreation in the proposed project area.

4.14.2.3 Regional and Local

This section summarizes the goals and policies of each jurisdiction crossed by the proposed project. Policies regarding the preservation of natural features and open space are addressed in Section 4.1, "Aesthetics" and Section 4.10, "Land Use and Planning." Policies regarding pedestrian and bicycle trails are addressed in Section 4.15, "Traffic and Transportation."

The Ventura County General Plan (2011), Ojai Valley Area Plan (Ventura County 2008), Santa Barbara County Coastal Land Use Plan (2009), and City of Ventura General Plan (2005) include goals and policies pertaining to recreation; however, none of these goals or policies would apply to the proposed project. These plans have, therefore, been eliminated from this discussion.

Santa Barbara County General Plan

The Santa Barbara County General Plan includes the following policy pertaining to recreation that would apply to the proposed project (Santa Barbara County 2011):

- *Opportunities for hiking and equestrian trails should be preserved, improved, and expanded wherever compatible with surrounding uses.*

City of Carpinteria General Plan and Local Coastal Program

The City of Carpinteria General Plan and Local Coastal Program includes goals and policies pertaining to recreation that would be applicable to the project. The following policy would apply to the proposed project (City of Carpinteria 2003):

> ***OSC-15b.*** *Support enhancement of access trails along creekways designated as open space up to the foothills of the Santa Ynez mountain range. This should include exploring trail development for public use along the Edison easement behind Carpinteria High School, ending on the first ridge above the city. This should be linked to the old Franklin trail, leading to the ridge up to East Camino Cielo. Trail restoration and enhancement of easement areas should be pursued to restore the natural beauty along these trails by negotiating with property owners, the school district, and the National Forest, to redesign trails and adopt protective fencing methods.*

4.14.3 Impact Analysis

4.14.3.1 Methodology and Significance Criteria

To assess impacts on recreation, the proposed construction schedule and number of construction workers (Chapter 2, "Project Description") was reviewed to determine if the proposed project would increase population in the propose project area that could lead to increased use of recreation facilities. The significance criteria were defined based on the checklist items in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. An impact is considered significant if the project would:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.

Additionally, the following criterion was added to assess the impact from disruption of existing recreation activities:

b) Would the project disrupt access to existing recreation opportunities?

Appendix G of the CEQA Guidelines also includes the following checklist item. The proposed project would cause a significant impact on recreation if it would:

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

The proposed project would not involve the construction or expansion of recreational facilities and would not pose a substantial demand on existing recreational facilities. Therefore, this item is not applied as a criterion in the analysis of environmental impacts presented in this section.

4.14.3.2 Applicant Proposed Measures

There are no Applicant Proposed Measures associated with recreation for the proposed project.

4.14.3.3 Environmental Impacts

Impact RE-1: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
LESS THAN SIGNIFICANT

The applicant would use a local work force or construction contractor to construct the proposed project. Up to 105 workers would be working throughout the multi-county construction area on any given day. In the event that a non-local contractor is hired for construction of the proposed project, it is possible that some workers could temporarily relocate to the proposed project area for the duration of construction. However, it is unlikely that 105 people would relocate, and even if up to 105 construction workers were to relocate to the project area, a major increase in the use of existing neighborhood and regional parks or other recreational facilities would not be expected. The number and variety of recreational facilities within the proposed project area, some of which are shown in Figure 4.10-1, would be adequate to accommodate the potential temporary and minor increase in use of local recreational areas and facilities by construction workers, particularly because workers could relocate to anywhere within the greater project vicinity, such as the Santa Barbara area or the cities of Carpinteria, Ojai, or Ventura, among other communities.

Maintenance activities at each substation and segment of the proposed project would not require staff beyond the existing SCE staff that already conducts periodic inspections and maintenance of these facilities. There would be no long-term increase in the use of existing neighborhood and regional parks or other recreational facilities. A less than significant impact would result under this criterion.

Impact RE-2: Would the project disrupt access to existing recreation opportunities.
LESS THAN SIGNIFICANT WITH MITIGATION

The proposed project would occur within one mile of 16 recreational facilities. The proposed project would have no impact on access to 13 of the 16 recreational facilities throughout construction and restoration. The remaining three facilities are overlapped by the proposed project and include the Los Padres National Forest, Ojai Valley Trail, and Franklin Trail.

Four structures, including structure pads, as well as access roads would be located on lands administered by the Los Padres National Forest. Construction activities on Forest Service-administered lands would require temporary closures of portions of Los Padres National Forest. The proposed project would be located on Forest Service-administered land parcels that are intermixed with private land or located immediately adjacent to private land. Due to access restrictions from surrounding private land, the proposed project wouldn't be located on Forest Service-administered lands that are widely used for recreation by the public. Therefore, the

proposed project would not create a significant impact on access to existing recreation opportunities within the Los Padres National Forest.

The Ojai Valley Trail is a multipurpose trail and bike path. The Ojai Valley Trail would be crossed by Segment 2 immediately west of the Casitas Substation. Conductor stringing along Segment 2 would require temporary closures of a portion of the Ojai Valley Trail near the Casitas Substation.

The first phase of the Franklin Trail, which is a 2.25 mile long pedestrian and equestrian trail, was recently completed and is open to the public. The northern terminus of the first phase of the trail overlaps with an existing SCE access road along Segment 4 approximately 0.80 miles north of the Carpinteria Substation. Construction along Segment 4 would require temporary closures of the northern portion of the Franklin Trail, which overlaps with the proposed project. Portions of the Franklin Trail that are adjacent to, but not overlapping with, the proposed project would require temporary closures during conductor stringing activities between the Carpinteria Substation and approximately one mile north of the Carpinteria Substation.

Unannounced temporary closures or detours along the Ojai Valley Trail and Franklin Trail would impact members of the public that use the trails. MM RE-1 would require the applicant to provide the public with at least one week notice of potential closures. Impacts on access to existing recreation opportunities would be reduced to less than significant with the implementation of mitigation.

4.14.4 Mitigation Measures

MM RE-1: Notification of Trail Closure. The applicant shall provide users of the Ojai Valley Trail and the Franklin Trail with at least one week notice of expected trail closures and/or detours. The applicant shall coordinate with the City of Carpinteria Parks and Recreation Department and the County of Ventura Parks Department, for their respective parks, to determine appropriate locations to post notifications, such as trailhead kiosks, access points, or the departments' websites. Notifications that are posted outside shall be protected from general weather conditions. Notifications shall include the following minimum information:

- The date the notification is posted;
- General description of activities that are causing the closure;
- Description (or map) of areas that will be affected by the closure;
- The date (or date range) and time range that temporary closures will occur;
- Approximate length of closure (i.e., will it be a series of 30 minute closures, or one, 8 hour closure); and
- Description (or map) of detour directions, if applicable.

The applicant shall provide a copy of the trail closure notification to the City of Carpinteria Parks and Recreation Department and the County of Ventura Parks Department, for their respective parks, and the CPUC on the same day that the notice is posted. The applicant shall regularly confirm that notifications remain posted and in good condition throughout the affected timeline.

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4.15 Traffic and Transportation

This section describes the environmental and regulatory setting and discusses impacts associated with the construction and operation of the proposed project with respect to traffic and transportation. Information regarding the existing roadway system and transportation infrastructure was obtained from the following sources: highway maps, route alignment maps, the PEA, and other maps from various reports and websites of the affected State and local agencies. Roadway capacities and operating criteria were obtained from general plans, traffic departments, and or public works departments of the affected agencies. Lane information was obtained from aerial photographs, local government agencies, and public maps.

4.15.1 Environmental Setting

4.15.1.1 Existing Roadway Network

The proposed project is located primarily in rural areas of Santa Barbara and Ventura counties with limited transportation infrastructure. The roadway network in the study area affected by construction and operational traffic is comprised of interstate highway U.S. 101, state highways, and local roads within unincorporated Ventura County and Santa Barbara County and in the cities of Ventura and Carpinteria.

Figure 4.15-1(a-e) depicts highways and local roadways in the proposed project area.

Highways

A description of the highways in the proposed project area is provided below.

Interstate U.S. 101. U.S. 101 runs north and south along the Pacific Coast. U.S. 101 does not intersect with the project components but serves as a primary link between the Santa Barbara County, Ventura County, and Los Angeles County to the south. In addition, Interstate 101 also provides a link between the City of Ventura (San Buenaventura) and the City of Carpinteria. As the busiest freeway within Ventura County, U.S. 101 is a four to six lane highway from the intersection with State Route (SR) 33 into Santa Barbara County (Ventura County Transportation Commission 2009).

State Route 33. SR-33 runs north and south from the intersection with U.S. 101 in the City of Ventura to Ojai, the Los Padres National Forest, and the Santa Barbara County Line in the north. Segment 1 crosses SR-33 as it enters the Casitas Substation which is located along SR-33 approximately 0.7 miles north of the Casitas Vista Road intersection. SR-33 is a four lane freeway, two lanes in either direction, from the intersection with U.S. 101 to Casitas Vista Road and becomes a two lane non-freeway segment as the road runs north past the Casitas Substation towards the City of Ojai (Ventura County Transportation Commission 2009).

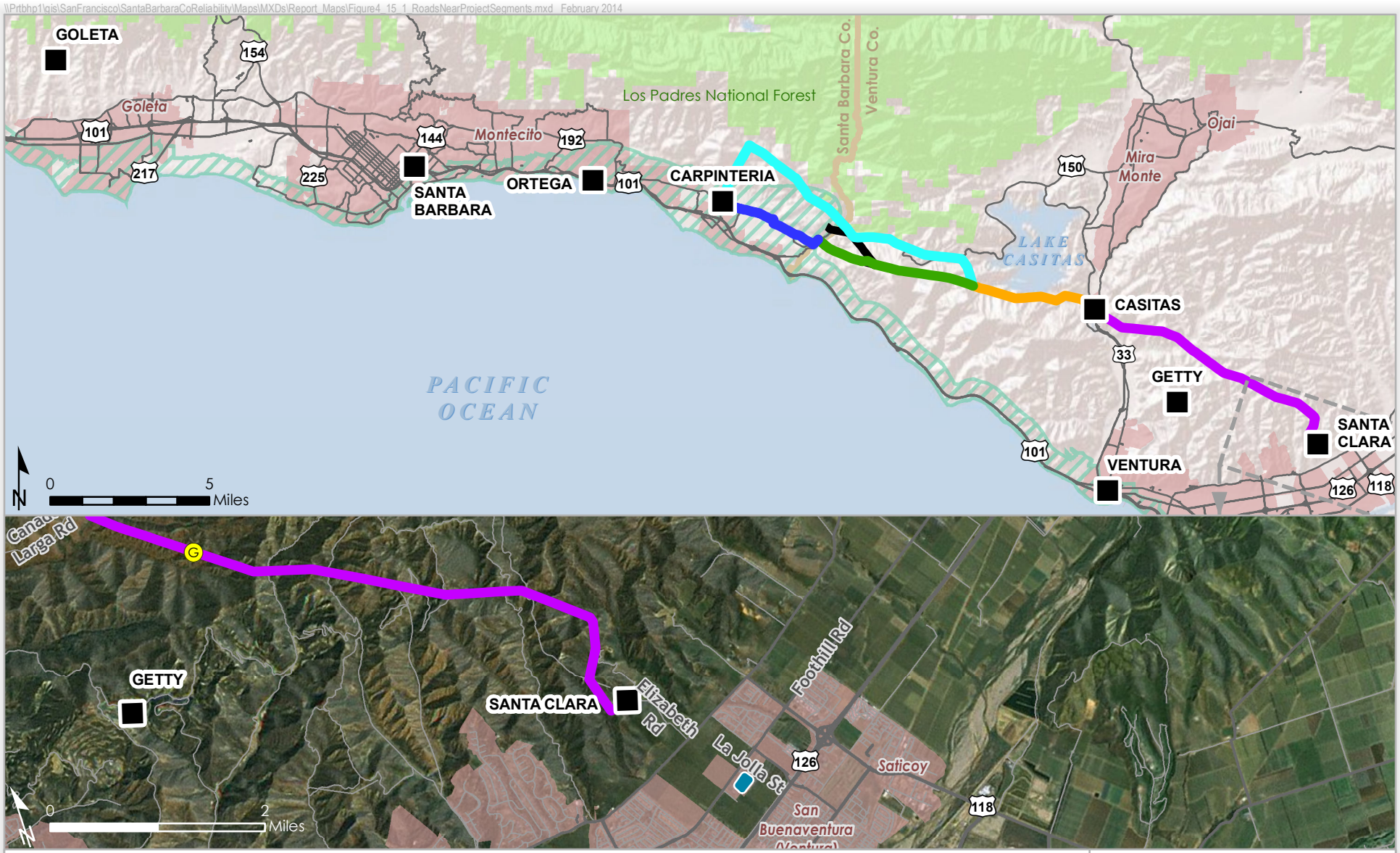

Figure 4.15-1a
Local Roads and Highways in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

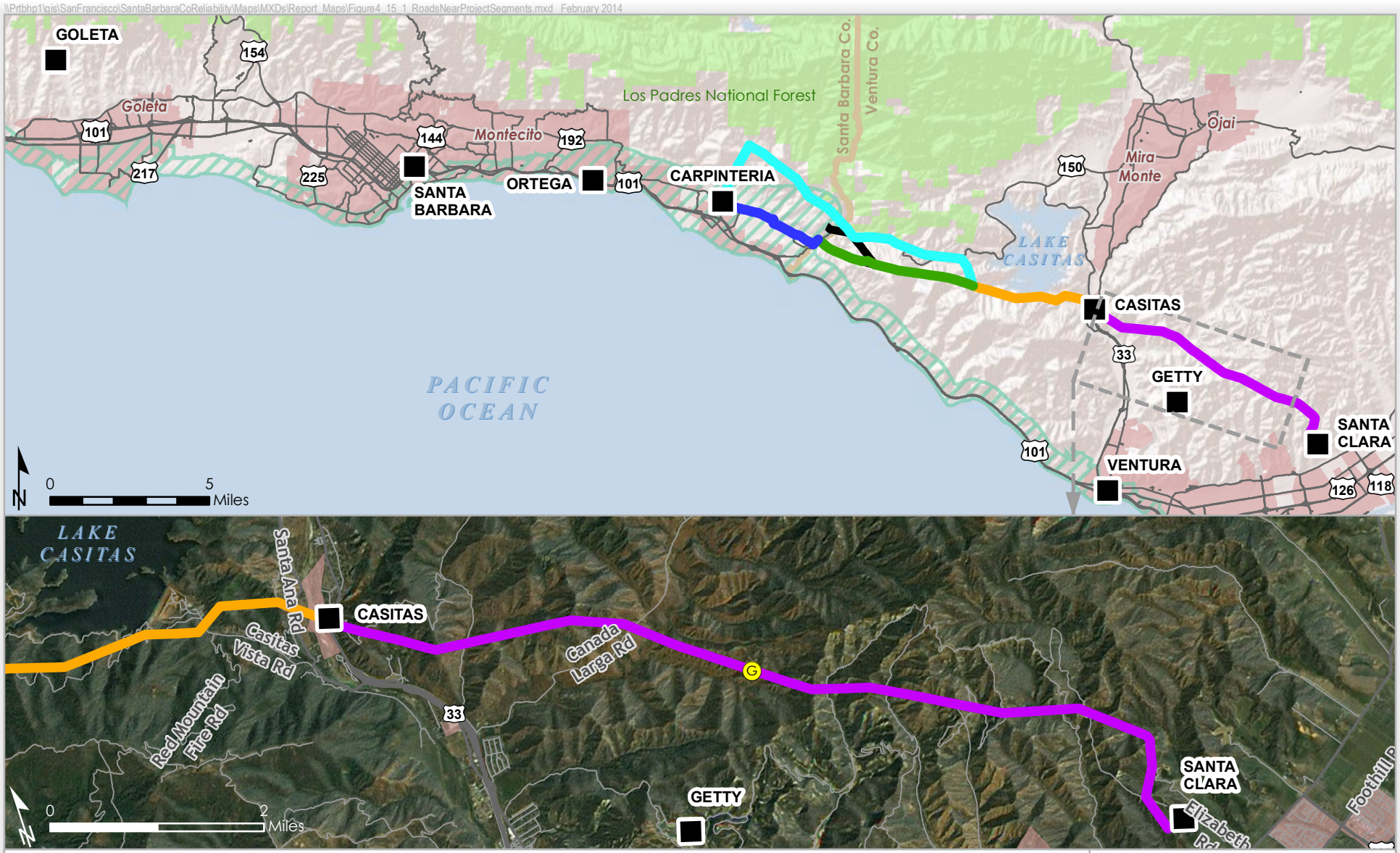

Figure 4.15-1b
Local Roads and Highways in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

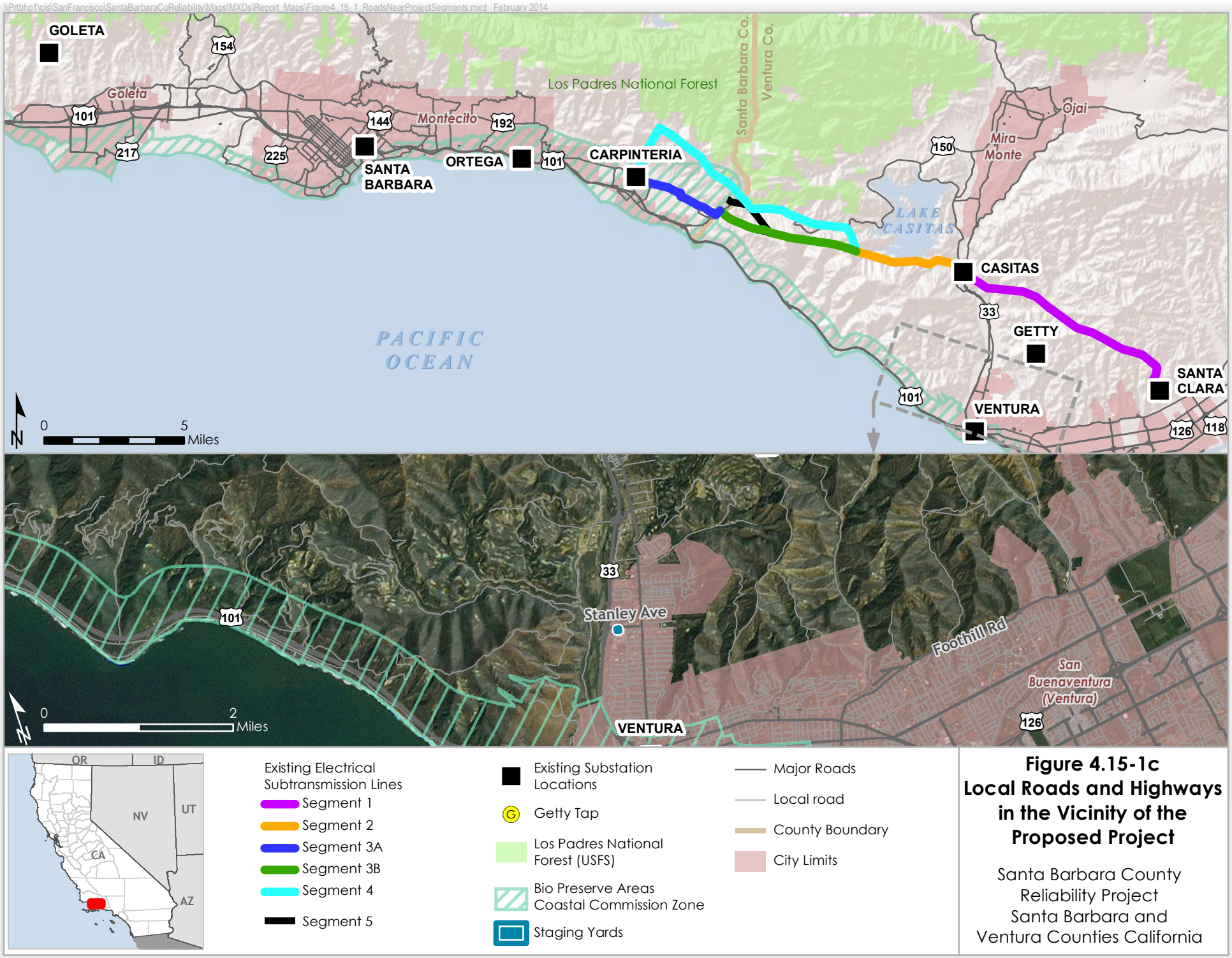

Figure 4.15-1c
Local Roads and Highways in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

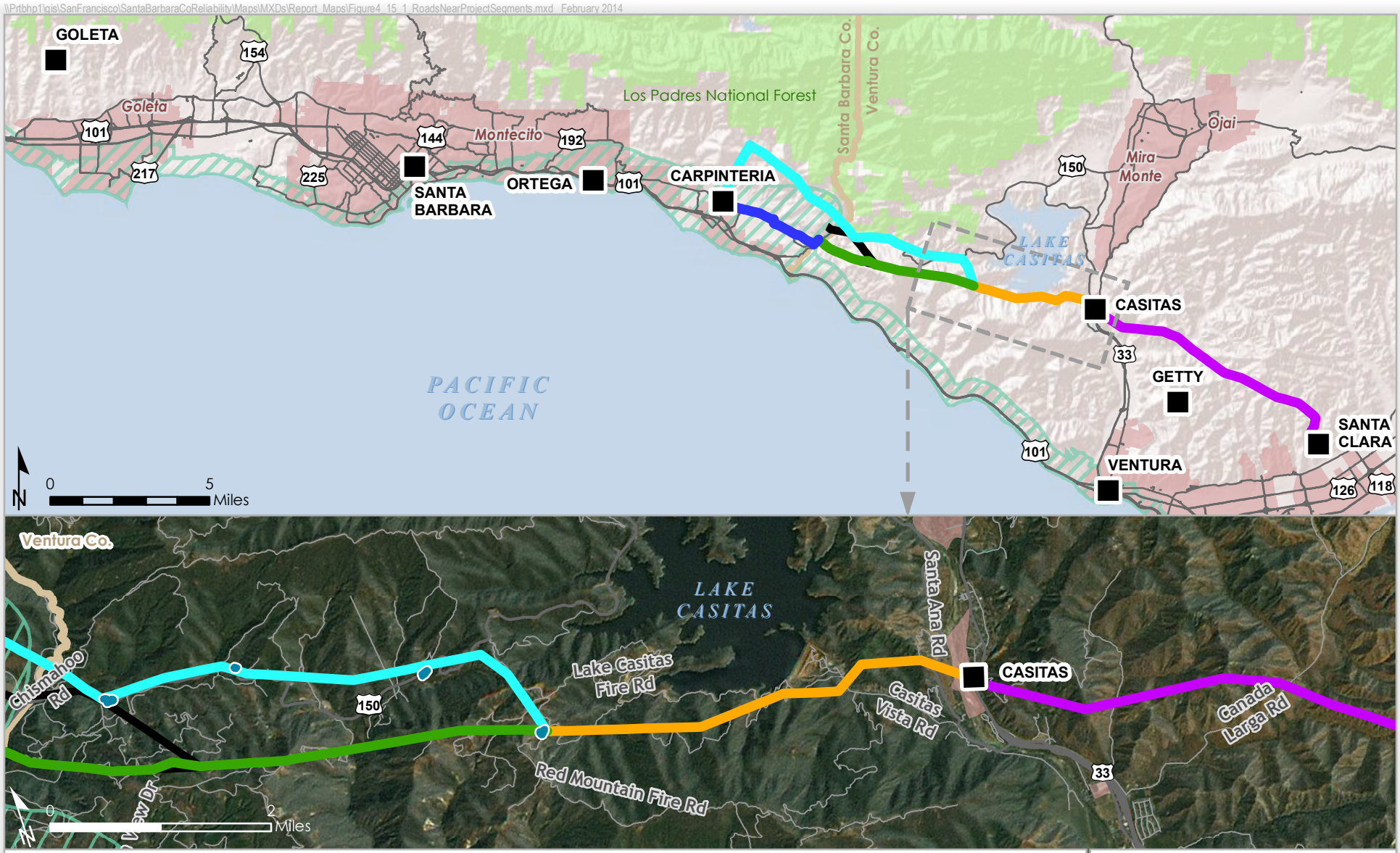

Figure 4.15-1d
Local Roads and Highways in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

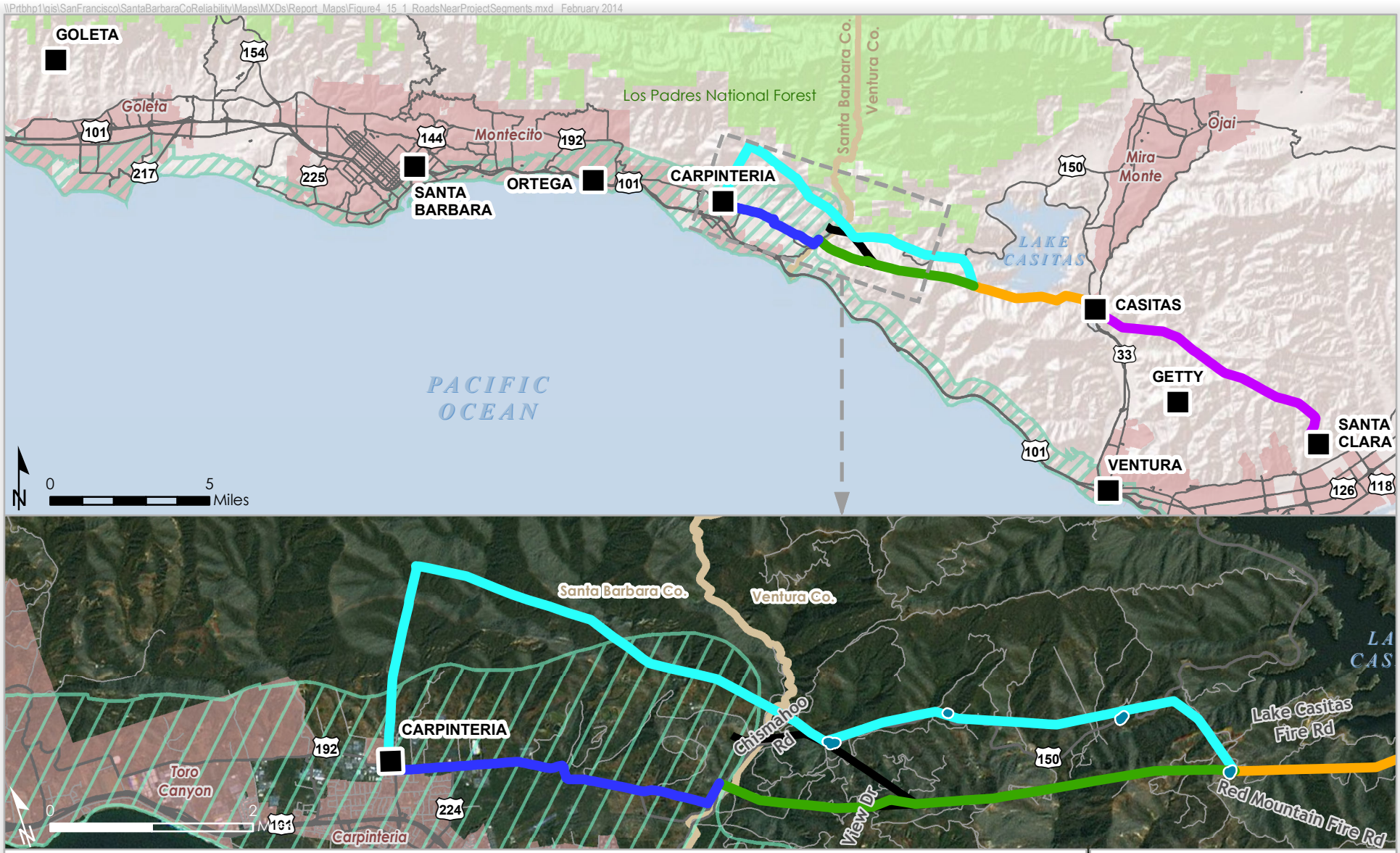

Figure 4.15-1e
Local Roads and Highways in the Vicinity of the Proposed Project

Santa Barbara County Reliability Project
Santa Barbara and Ventura Counties California

State Route 118. SR-118 runs in an east/west direction from the community of Saticoy through Somis and the City of Moorpark to the Los Angeles County Line. The southern terminus of the proposed project, where Segment 1 intersects with the Santa Clara Substation, is located approximately 1.8 miles northwest of the intersection of SR-118 with SR-126. SR-118 is primarily a two lane (non-freeway) highway between SR-126 to SR-23 and widens to a six to eight lane freeway to the Los Angeles County Line (Ventura County Transportation Commission 2009).

State Route 126. SR-126 runs east from the intersection with U.S. 101 in the City of Ventura (San Buenaventura) through the Cities of Santa Paula and Fillmore to the Los Angeles County Line. The southern terminus of the proposed project, where Segment 1 intersects with the Santa Clara Substation, is located approximately 1.8 miles northwest of the intersection of SR-126 with SR-118. SR-126 is a four lane freeway from U.S. 101 through the City of Santa Paula and becomes a four lane (non-freeway highway) as it continues further east (Ventura County Transportation Commission 2009).

State Route 150. SR-150 runs primarily in an east/west direction from U.S. 101 in Santa Barbara County in the west to the Cities of Ojai and Santa Paula in Ventura County in the east. Segment 3B crosses SR-150 as it connects with Segment 3A approximately 0.1 miles northeast of the intersection with SR-192 in Santa Barbara County. This section of SR-150 is a two lane road that connects with U.S. 101 to the southwest. Segment 4 runs adjacent to SR-150 and crosses the road nine times within Ventura County. This section of SR-150 is a two lane rural road that winds through the mountains towards Lake Casitas and the City of Ojai (Ventura County Transportation Commission 2009).

State Route 192. SR-192, also known as Casitas Pass Road in the proposed project area, runs primarily in an east/west direction in Santa Barbara County from SR-154 in the west to SR-150 in the east. SR-192 runs parallel to U.S. 101 along the coastal shelf foothills and provides access to residential and agricultural areas north of the City of Carpinteria. The Carpinteria Substation is located just north of the of Linden Avenue intersection with SR-192. Segment 3A is located along SR-192 from the Carpinteria Substation to the intersection of Shepard Mesa Drive. Segment 3A crosses SR-192 at the intersections of Route 224 in the City of Carpinteria, Lillington Canyon Road, and Shepard Mesa Drive. SR-192 is a two lane rural highway (City of Carpinteria 2003).

Local Roadways

In addition to the highways described above, the local roads that are located adjacent to or crossed by project components are listed in Table 4-15-1.

Table 4.15-1 Local Roadways Located in Proximity to the Proposed Project

Roadway	Adjacent Project Component	County
Linden Avenue	Segment 3A and 4	Santa Barbara County
Shepard Mesa Drive	Segment 3A	Santa Barbara County
Lillingston Canyon Road	Segment 4	Santa Barbara County
Cate Mesa Road	Segment 4	Santa Barbara County
Gobernador Canyon Road	Segment 4	Santa Barbara County
Chismahoo Road	Segment 4	Ventura County
Rameli Ranch Road	Segment 4	Ventura County
Ocean View Drive	Segment 3B	Ventura County
Red Mountain Fire Road	Segment 2, 3B, 4 (the "Y" intersection)	Ventura County
Lake Casitas Fire Road	Segment 2	Ventura County

Table 4.15-1 Local Roadways Located in Proximity to the Proposed Project

Roadway	Adjacent Project Component	County
Casitas Vista Road	Segment 2	Ventura County
Santa Ana Road	Segment 2	Ventura County
Canada Larga Road	Segment 1	Ventura County
Elizabeth Road	Santa Clara Substation	Ventura County
Foothill Road	Segment 1	Ventura County
W. Stanley Ave.	Staging Yard 1	Ventura County
La Jolla Street/Telegraph Road	Staging Yard 5	Ventura County

Source: SCE 2012

Existing Traffic Conditions

The operational efficiency of traffic is typically measured by level of service (LOS), a traffic performance metric established by the Transportation Research Board's Highway Capacity Manual. LOS is used to measure the average operating conditions on roadways and at intersections during a one hour period. The metric is based on volume-to-capacity (V/C) ratio, which compares roadway capacity to level of traffic during peak hours. Once determined, a V/C ratio is assigned a corresponding LOS value to describe roadway or intersection operations. Roadways and intersections that are at or near capacity experience greater congestion and corresponding vehicle delay. The highest ranked roadways are designated "LOS A," representing free-flowing traffic, and the lowest ranked roadways are designated "LOS F," representing extreme congestion. "LOS D" is generally identified as the minimum level of delay that motorists will find acceptable in suburban areas, and "LOS C" is the minimum level of delay determined to be acceptable in rural areas (AASHTO 2004).

Tables 4.15-2 and 4.15-3 provide general descriptions of LOS based on the 2000 Highway Capacity Manual's definitions for uninterrupted flow facilities such as highways and interrupted flow facilities such as intersections. These LOS definitions are consistent with those included in the 2009 Santa Barbara County Congestion Management Program, Ventura County Congestion Management Program, Santa Barbara County Comprehensive Plan Circulation Element, Ventura County General Plan, City of Carpinteria General Plan and Local Coastal Program, and City of Ventura General Plan Final Environmental Impact Report.

Table 4.15-2 Level of Service Definitions for Uninterrupted Flow Facilities

Level of Service	Definition
A	Represents free flow. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.
B	Within the range of free flow. The ability to maneuver within the traffic stream is only slightly restricted, and the level of physical and psychological comfort provided to drivers is still high.
C	Provides for flow with speeds still at or near the free flow speed. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance.
D	Speeds begin to decline slightly with increasing flows. Freedom to maneuver within the traffic stream is more noticeably restricted.
E	Represents operating conditions at or near the capacity level. Vehicles are spaced at approximately six car lengths, leaving little room to maneuver within the traffic stream at speeds that still exceed 50 mph. Maneuverability within the traffic stream is extremely limited, and the level of physical and psychological comfort afforded the driver is extremely poor.

Table 4.15-2 Level of Service Definitions for Uninterrupted Flow Facilities

Level of Service	Definition
F	Defined as forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Vehicles may progress at reasonable speeds for several hundred feet or more, than be required to stop in a cyclic fashion.

Source: SBCAG 2009

1

Table 4.15-3 Level of Service Definitions for Interrupted Flow Facilities

Level of Service	Volume-to-Capacity (V/C) Ratio	Average Seconds of Delay per Vehicle	Definition
A	0.000 – 0.600	0.0 – 10.0	Represents excellent flow conditions through the intersection. A large portion of the flow is not interrupted by signalization with only slight delays experienced by those which are. Given the maximum efficiency conditions at this LOS, driver dissatisfaction will be at a minimum.
B	0.601 – 0.700	10.1 – 20.0	Quality of service is comparable to LOS A except for a larger portion of total traffic volume will be subject to delay. Though delay time is short, small queues may form, lowering the quality of service perceived by motorists. All vehicles however, are able to clear the intersection during a single cycle.
C	0.701 – 0.800	20.1 - 35.0	At this level of service, moderate sized queues will form during each signalized cycle. Although the percentage of delay-free utilization has greatly diminished, all vehicles should clear the intersection during the green phase for their approach.
D	0.801 – 0.900	35.1 – 55.0	At this stage, queues will begin to become extensive in length. They will form for every cycle with a small number of vehicles being delayed for more than one cycle. This is considered unacceptable to most motorists and will significantly increase their frustration. Queues should not however, extend beyond the allocated space provided for vehicle storage (e.g., off-ramps, distance from upstream intersection).
E	0.901 – 1.000	55.1 - 80.0	An intersection operating at this LOS will have long queues and a large amount of delay for most vehicles. A significant number of motorists will require more than one complete cycle to clear the intersection. Queues may extend beyond the available vehicle storage. An increase in traffic can cause intersection failure (LOS F).
F	> 1.000	80.1 +	This LOS is indicative of intersection failure, characteristics of which include: excessive vehicle delay; excessive queue lengths which extend beyond the available storage; and, a large percentage of vehicles delayed for multiple signal cycles.

Source: SBCAG 2009

2

Proposed Project Area Key Intersections and Roadways

The applicant's actual sequencing/phasing of construction activities is unknown at this time, therefore, the routes that construction and personal vehicles may follow will not be known until construction schedules/sequencing are finalized. The applicant identified major roadways and intersections likely to be used during the construction and operation of the proposed project. Table 4.15-4 lists the major roadways that may be used during construction and operations and their peak AM and PM LOS. Table 4.15-5 presents the LOS for the key intersections within the proposed project area that may be used during construction and operations.

Table 4.15-4 Level of Service for Roadways that May be Used during Construction and Operation

Roadway	Segment	LOS AM Peak	LOS PM Peak	Jurisdiction
U.S. 101	SR-126 to SR-33	NB: C SB: C	NB: D SB: D	Ventura County
U.S. 101	SR-33 to Ventura /Santa Barbara County Line	NB: C SB: A to B	NB: A SB: C	Ventura County
U.S. 101	Bates Rd. (Ventura /Santa Barbara County Line) to SR-150	NB: B SB: A	NB: A SB: B	Santa Barbara County
U.S. 101	SR-150 to Bailard Ave.	NB: D SB: A	NB: A SB: B	Santa Barbara County
U.S. 101	Bailard Ave. to Casitas Pass Road (Route 224)	NB: D SB: A	NB: B SB: C	Santa Barbara County
SR-33	U.S. 101 to Casitas Vista Road	NB: A SB: B	NB: B SB: A	Ventura County
SR-126	U.S. 101 to SR-118	EB: B WB: C	EB: D WB: B	Ventura County
SR-150	U.S. 101 – SR-192	No Data	NB: C SB: C	Santa Barbara County
SR-150	Ventura /Santa Barbara County Line to SR- SR-33	No Data	No Data	Ventura County
SR-192	Carpinteria Substation (Linden Ave.) to SR-150	No Data	EB: C WB: C	Santa Barbara County

Source: SBCAG 2009, Ventura County Transportation Commission 2009
Key:
EB Eastbound
NB Northbound
SB Southbound,
WB Westbound,

Table 4.15-5 Level of Service for Intersections that May be Used during Construction and Operation

Intersection	LOS AM Peak	LOS PM Peak	Jurisdiction
US-101 NB off-ramp to SR-150	C	B	City of Carpinteria
SR-150 on-ramp to SB US-101	A	C	City of Carpinteria
US-101 SB SR-150 Off-Ramp	A	C	City of Carpinteria
US-101 NB Casitas Pass Road off-ramp	F	C	City of Carpinteria
US-101 SB Casitas Pass Road Off-Ramp	B	D	City of Carpinteria
Casitas Pass Road on-ramp to US-101 SB	B	C	City of Carpinteria
US-101 SB Linden Ave. Off-Ramp	B	D	City of Carpinteria
Telegraph Rd. and Saticoy Ave.	A	A	City of Ventura
Foothill Rd. and Saticoy Ave.	A	A	City of Ventura
Telegraph Rd. and Wells Rd.	A	A	City of Ventura
Telegraph Rd. and Kimball Rd.	A	A	City of Ventura
Foothill Rd. and Kimball Rd.	A	A	City of Ventura
SR-126 EB off-ramp to Kimball Road NB	A	A	City of Ventura
S. Kimball Road SB on-ramp to SR-126 WB	A	A	City of Ventura
SR-126 EB off-ramp to S. Wells Road NB	C	B	City of Ventura

Source: Fehr and Peers Transportation Consultants 2007; City of Ventura 2005b
Notes:
Level of Service Ranges for City of Ventura Existing LOS summary:
.00 - .60 = A
.61 - .70 = B
.71 - .80 = C
.81 - .90 = D
.91 - 1.00 = E
Above 1.00 = F

Existing Public Transit Systems, Rail, Air Transport, and Pedestrian and Bicycle Trails

Transit Systems

Since the proposed project is primarily located in the rural, mountainous areas of Santa Barbara and Ventura Counties there are no bus and other mass transit options located along the majority of the project route. Gold Coast Transit (formerly known as South Coast Area Transit (SCAT) and Ventura Intercity Service Transit Authority (VISTA) provide public bus service to the proposed project vicinity. VISTA provides inter-city bus service between the City of Ventura and Carpinteria along with other cities within Ventura, Santa Barbara, and Los Angeles Counties. Gold Coast Transit provides fixed-route bus services in the Cities of Ventura, Ojai, Oxnard, and Port Hueneme along with the unincorporated County areas between the cities. Gold Coast Transit bus route 10 provides service to the Santa Clara substation area and Staging Yard 5. In addition, Gold Coast Transit bus route 16 runs along State Route 33 in the vicinity of Staging Yard 1, Segments 1 and 2, and the Casitas Substation. Metrolink provides commuter rail service from the City of Ventura to Los Angeles (Gold Coast Transit 2013, City of Ventura 2005a, County of Ventura 2011).

The Santa Barbara Metropolitan Transportation District (SBMTD) serves the City of Carpinteria. Bus Route 20 provides a link between the City of Santa Barbara and the City of Carpinteria and is routed along Via Real and Carpinteria Avenue in the City of Carpinteria. The Seaside Shuttle provides local shuttle service between the residential neighborhoods north of U.S. 101, the City of Carpinteria's downtown and the beach area. The Carpinteria Area Rapid Transit (CART) service provides the general public along with elderly and handicapped individuals with door-to-door

demand response service. Private bus carriers, such as Greyhound Bus Lines, operate out of the downtown bus depot (City of Carpinteria 2003).

Railroads

Amtrak runs along the Pacific Coast and provides passenger rail service within the vicinity of the proposed project area. Both the City of Carpinteria and the City of Ventura have Amtrak stations. The closest freight service is the Union Pacific Transportation Company which also runs along the coast. With the proposed project vicinity the Union Pacific Transportation Company runs from the Santa Barbara County line along the coast through to Ventura and Oxnard and provides intra-state and trans-continental rail freight service. The Ventura County Railroad Company is a short line local railroad that connects the Union Pacific tracks in Oxnard with the Navy Base Ventura County and Port Hueneme (Ventura County 2011).

Air Transportation

Three public airports are located within the vicinity of the proposed project. The Ventura County-owned and operated Oxnard and Camarillo Airports are located approximately 7 miles southwest and 7 miles southeast of the Santa Clara Substation, respectively. In addition, there is a private airport located in Santa Paula approximately 7 miles east of the Santa Clara Substation. The federally operated runways at Navy Base Ventura County are located approximately 13 miles southeast of the Santa Clara substation (Ventura County 2011). The Santa Barbara Municipal Airport is located approximately 18 miles west of the Carpinteria Substation.

As described in Chapter 2, Project Description, helicopters would be used to support construction and operation activities in areas where access is limited or where system outage constraints are a factor. Helicopters and their associated support vehicles and equipment may be based at a local airport at night or on off days. Helicopters must be able to land within the applicant's ROWs, which could include landing on access or spur roads or one of the 14 landing zones located along Segments 1, 2 and 4.

Pedestrian and Bicycle Trails

Bikeways are located within the proposed project area primarily within the City of Carpinteria and the City of Ventura. Bikeway facilities range from dedicated off-street routes to shared lanes within roadway rights of ways. A state bikeway route runs adjacent to U.S. 101. In some instances bikeway and trail segments are proposed to run alongside the same roadway as the proposed project such as the Class III bikeway along State Route 192. Segment 2 crosses the Ojai Valley Trail, a converted rail line that is a multipurpose trail and Class I bikeway located adjacent to State Route 33. The Franklin Trail is a proposed trail project that has been approved by the Santa Barbara County Parks Department. A portion of the trail will improve the existing Franklin Trail. In addition, the trail will also include a portion of the Segment 4 access roads which will be improved as part of the proposed project. Bikeways and trails within the proposed project area are described in greater detail in Table 4.15-6.

Table 4.15-6 Bikeways and Trails within the Proposed Project Area

Bikeway	Location	Adjacent Project Component
Class III Bikeway (Bike Route indicated by sign only, parking is not restricted)	State Route 192, Santa Barbara County	Segments 3A, 3B, Carpinteria Substation
Ojai Valley Trail - Class I Bikeway (Path is separate from automobile traffic)	Parallels State Route 33, Ventura County	Segments 1, 2, Casitas Substation
Class II Bikeway (On-street painted bike lane)	W. Stanley Ave., City of Ventura	Staging Yard 1
Trail	**Location**	**Adjacent Project Component**
Franklin Trail (approved proposed trail - Santa Barbara County Parks Department)	Southern portion of the trail is in the County of Santa Barbara and the City of Carpinteria	Overlaps with the access road for Segment 4

Source: Santa Barbara County 2010; Ventura County Transportation Commission 2013

4.15.2 Regulatory Setting

Laws, regulatory requirements, and plans addressing traffic and transportation are presented below.

4.15.2.1 Federal

Federal Aviation Administration and Helicopter External-Load Operations

The Federal Aviation Administration (FAA) administers the Federal Aviation Regulations (Title 14 of the Code of Federal Regulations [CFR]). CFR Title 14, Part 133 establishes regulations for Rotorcraft External-Load Operations. All operators of rotorcraft (helicopters) with external loads, including the pilot, mechanics, and ground crew, must be certified Rotorcraft External-Load Operators pursuant to 14 CFR Part 133. The helicopters used must also be certified. Rotorcraft External-Load Operator Certificates are valid for 24 months. Operators are permitted to conduct external-load operations over densely populated areas or areas congested with structures and objects with FAA approval of a Congested Area Plan.

For the proposed project, all Congested Area Plans would be approved by the Van Nuys Flight Standards District Office. Site inspections of Congested Area Plan operational areas, including emergency landing areas, are generally completed by an FAA inspector for new plans or sites with which the inspector is not familiar. Monitoring of congested area plan operation by FAA inspector occurs intermittently to the extent that representatives are available and depending on risk levels associate with the project.

In addition, all helicopter external-load operations must be conducted in conformance with the Rotorcraft Load Combination Flight Manual, which must be prepared by the operator and approved by the FAA. The approved Flight Manual will specify the types of external loads that may be carried (Class A though D), and maximum weight of external loads. The FAA requires that Flight Manual review be completed by a qualified FAA Aviation Safety Inspector who, whenever possible, has experience as an external-load pilot.

Holders of Rotorcraft External-Load Operator Certificates are inspected two to three times per year regardless of whether a Congested Area Plan is in operation. Additional inspections may be conducted if a Congested Area Plan is involved. FAA inspectors conduct Ramp Inspections and Base Inspections as specified in 14 CFR Part 133. During Ramp Inspections, the attaching means and retraining device for external loads and pilots and personnel approved to operate the attaching means are inspected. Personnel proficiency with external-load operations may be observed. A ramp inspection is generally an onsite surveillance of an actual external-load operation. During Base Inspections, operator records are inspected and interviews may be conducted.

National Transportation Safety Board

The National Transportation Safety Board determines the probable cause of transportation accidents and promotes transportation safety. Aircraft operators are required to notify the Board immediately of aviation *accidents* and certain *incidents*. An accident is defined as an occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage. An incident is an occurrence other than an accident that affects or could affect the safety of operations.

Occupational Health and Safety Administration

The Occupational Safety and Health Administration (OSHA) administers Occupational Safety and Health Standards (CFR Title 29) that establish regulations for safety in the workplace and construction safety. CFR Title 29, Parts 1910.183 and 1926.551 establish regulations for helicopter use during construction. Briefings are required prior to each day of helicopter operation about the plan of operation for the pilot and ground personnel. Cargo hooks used for securing helicopter external loads must be tested electrically and mechanically prior to each day of operation. In addition, the standards address weight limitations, static charge dissipation, signal systems between air and ground crews.

4.15.2.2 State

Caltrans

The California Department of Transportation (Caltrans) is responsible for the oversight of state highways within California. Caltrans requires that all work done within a state highway right-of-way (ROW) obtain an encroachment permit from Caltrans. Encroachment permits must also be obtained for transmission lines that span or cross any state roadways. In addition, Caltrans has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles contained in Division 15 of the California Vehicle Code. Completion of a Transportation Permit application is required for requests for such special permits (Caltrans 2013).

4.15.2.3 Regional and Local

The majority of roads that parallel or would be crossed by the proposed project components are under the jurisdiction of Santa Barbara County, Ventura County or the Cities of Carpentaria and Ventura. County or city policies and regulations regarding the design or use of roadways are detailed in the circulation/mobility and transportation elements of these local general plans. In addition new projects are required to comply with Congestion Management Programs of Santa Barbara and Ventura Counties.

Santa Barbara County Congestion Management Program

The Santa Barbara County Association of Governments (SBCAG) is the Congestion Management Agency for the County and establishes the Congestion Management Program (CMP). Issues associated with increasing congestion on regional highways and arterials are addressed by CMP. The Santa Barbara County CMP has established LOS D as the minimum acceptable LOS for intersections and roadways within the CMP network. U.S. 101, SR-150 and SR-192 are part of the Santa Barbara County CMP network. If a roadway within the CMP network operates below this standard a deficiency plan is prepared (SBCAG 2009). A deficiency plan was prepared for Highway 101 and approved by the County of Santa Barbara and the cities of Carpinteria and Santa Barbara (SBCAG 2002).

The Santa Barbara County CMP also outlines the thresholds of significant impact to the CMP network for environmental documents. The thresholds are developed to ensure that additional traffic impacts from new development will not adversely affect the CMP's regional street network. Development projects that generate more than a total of 500 average daily trips or 50 peak hour trips should be evaluated for potential impacts to the CMP system. The thresholds of significant impact to the CMP network are provided below (SBCAG 2009).

- For any roadway or intersection operating at LOS A or B, a decrease of two levels of service from project-added traffic;
- For any roadway or intersection operating at LOS C, project-added traffic that results in a LOS D or worse;
- For intersections on the CMP network with existing congestion, the following will define significant impacts;
  - Intersection LOS D: 20 project-added peak hour trips
  - Intersection LOS E or F: 10 project-added peak hour trips
- For freeway or highway segments with existing congestion, the following table will define significant impacts;
  - Intersection LOS D: 100 project-added peak hour trips
  - Intersection LOS E or F: 50 project-added peak hour trips

Ventura County Transportation Commission Congestion Management Program

The Ventura County Transportation Commission (VCTC) is the Congestion Management Authority for Ventura County and establishes the CMP. An updated CMP is prepared every two years to address issues related to traffic congestion throughout Ventura County. U.S. 101, SR-150, SR-126, and SR-33 are part of the Ventura County CMP network. The VCTC has established LOS E as the minimum acceptable LOS for the CMP road network. Deficiency plans are required for locations that have a LOS F in order raise the LOS to the minimum standard of "E" (VCTC 2009).

The VCTC CMP outlines a Project-Level Impacts analysis for significant proposed projects within the County. The analysis looks at specific congestion-related consequences of the proposed projects. VCTC will evaluate the proposed developments that meet the following criteria as part of the Project-Level Impacts analysis (VCTC 2009):

- The proposed land use is not included in the Ventura County Traffic Model because the project was not anticipated in the jurisdiction's general plan and the project will generate 200 or more peak hour trips in either peak hour; or
- The proposed land use is included in the VCTM as provided by the local agency, but because of an increase in project size or density the project will generate an additional 100 or more peak hour trips.

If a proposed project meets the criteria, VCTC reviews the environmental documents and traffic studies and will forward the findings of the analysis to the lead agency for their consideration in relation to traffic and air quality impacts associated with the proposed project. The findings do not recommend specific mitigation measures (VCTC 2009).

County/City General Plan

City of Carpinteria General Plan, Circulation Element

The City of Carpinteria General Plan, Circulation Element, outlines the following policies (City of Carpinteria 2003):

- **Objective C-1:** To improve the community's ability to access U.S. 101 and areas north of the freeway through the improvement of interchanges.
  - **Policy C-1a.** Continue coordination and collaboration with the County of Santa Barbara and Caltrans through SBCAG to improve freeway accessibility and to resolve circulation problems in inland areas.
- **Objective C-2:** To designate scenic routes so as to provide for the scenic enjoyment of and maintain and enhance the natural beauty of the lands and views along the roadways of the Carpinteria Valley.
  - **Policy C-2a.** To cooperate with the State and County of Santa Barbara in the designation and development of Highway 101, 150, and 192 within the Carpinteria Valley as scenic routes and official scenic highways. [10-year]
  - Policy C-2c. To develop scenic route procedures to ensure that public private land uses, site planning, landscaping, outdoor advertising, utilities, view corridors, earthmoving and architecture are consistent with the City's aesthetic objectives for Scenic Highways. [5-year]
- **Objective C-3:** Provide a balanced transportation network with consistent designations and standards for roadways that will provide for the safe and efficient movement of goods and people through the community.
  - **Policy C-3h.** Require all new projects to demonstrate safe traffic flow integration with the Master Plan of Streets as well as street/drainage improvements function. This shall include construction traffic and the designation of construction routes.

- **Objective C-5: Provide a system of safe and functional truck routes.**
  - **Policy C-5a.** The City may designate or prohibit City streets for use by any commercial vehicle or by any vehicles exceeding a maximum gross weight. Any street so restricted by ordinance may continue to be used by such vehicle for pickups and deliveries of goods, wares, merchandise and construction materials to any building or structure located on the restricted street. Should the City restrict by ordinance the use of any street within its jurisdiction by any commercial vehicle or by any vehicle exceeding a maximum gross weight, it shall identify an appropriate alternate route for such vehicle.

- **Implementation Policies:**
  - **Implementation Policy 1.** Projects contributing PHT's (peak hour trips) to intersections that operate at an estimated future level of service that is better than LOS C shall be found consistent with this implementation measure unless the project results in a change in V/C (volume/capacity) ratio greater than 0.20 for an intersection operating at LOS A or 0.15 for an intersection operating at LOS B. For intersections operating at an estimated future level of service that is less than or equal to LOS C, a project must meet the following criteria in order to be found consistent with this measure:
    - For intersections operating at an estimated future LOS C, no project shall result in a change of V/C ratio of greater than 0.10.
    - For intersections operating at an estimated future LOS D, no project shall contribute 15 or more PHT's.
    - For intersections operating at an estimate future LOS E, no project shall contribute 10 or more PHT's.
    - For intersection operating at an estimated future LOS F, no project shall contribute 5 or more PHT's.
  - **Implementation Policy 2.** Where a project's traffic contribution does not result in a measurable change in the V/C ratio at an intersection but does result in a finding of inconsistency with implementation measure 1 above, intersection improvements that are acceptable to the Director of Public Works shall be required in order to make a finding of consistency with these intersection standards. A measurable change in V/C ratio shall be defined as a change greater than or equal to 0.01.
  - **Implementation Policy 3.** Where a project's traffic contribution does result in a measurable change in V/C ration and also results in a finding of inconsistency with implementation policies 1 and 2 above, intersection improvements that are sufficient to fully offset the change in V/C ratio associated with the project shall be required in order to make a finding of consistency with these intersection standards.
  - **Implementation Policy 4.** Continue to enforce the existing truck route that directs trips on Via Real between the Bailard freeway interchange and Mark Avenue to Carpinteria Avenue, Highway 150 and Via Real (east of Mark) and amend the municipal code to extend the designation to Bega Way.
  - **Implementation Policy 5.** Monitor the operational and structural condition of city streets as well as the compatibility of truck traffic to existing and planned land use and, as appropriate, adopt a requisite ordinance(s) to designate or prohibit use of City streets by commercial vehicles or vehicles exceeding a determined weight.

- **Implementation Policy 6.** Encourage the County and State to implement operational improvements as necessary to serve traffic along the Highway 192 corridor.

City of Carpinteria Code of Ordinances

The City of Carpinteria's Code of Ordinances provides further detail on truck route establishment and regulations for vehicles exceeding a maximum gross weight of three tons. The Code of Ordinances also cites the following exceptions related to the CPUC (City of Carpinteria 2013):

- **10.40.040 Truck route establishment and regulations. C.** The provisions of this section shall not apply to passenger buses under the jurisdiction of the public utilities commission, or to any vehicle owned by a public utility while necessarily in use in the construction, installation or repair of any public utility.

City of Carpinteria Environmental Review Guidelines

The City of Carpinteria's Environmental Review Guidelines also establishes the following threshold for traffic impacts (City of Carpinteria 1997):

- City of Carpinteria Resolution No. 408 – Environmental Review Guidelines - Traffic
  (i) Definition: This threshold determines whether a project may cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system. The threshold criteria assume that an increase in traffic that creates a need for road improvements is substantial. The increase in traffic is measured in several ways including the LOS at affected intersections, the effect of proposed project access on existing traffic circulation, and the safety of a roadway with additional project traffic.

  (ii) Application: The City Engineer shall evaluate the potential for significant traffic impacts based on total number of trips generated by the project. If traffic impacts are determined to be significant by the City Engineer, a traffic Engineer may be retained to perform a detailed study of traffic distribution impacts.

City of Ventura General Plan/Final Environmental Impact Report

The City of Ventura General Plan's *Our Accessible Community Chapter* serves as the City's Circulation Element. The *Our Accessible Community Chapter* outlines the following policies that will potentially impact the project (City of Ventura 2005a):

- **Policy 4A:** Ensure that the transportation system is safe and easily accessible to all travelers.
  - **Action 4.9:** Identify, designate, and enforce truck routes to minimize the impact of truck traffic on residential neighborhoods.
  - **Action 4.13:** Require project proponents to analyze traffic impacts and provide adequate mitigation in the form of needed improvements, in-lieu fee, or a combination thereof.
- **Policy 4D:** Protect views along scenic routes.
  - **Action 4.36:** Require development along the following roadways – including noise mitigation, landscaping, and advertising – to respect and preserve views of the community and its natural context. (Roadways include: State Route 33, U.S. 101, Poli Street/Foothill Road)

See Section 4.1.1.5, "Scenic Vistas." for additional information regarding the scenic routes located within the proposed project area.

The City of Ventura General Plan's *Our Accessible Community Chapter* does not quantify LOS standards for the City's roadways. However, the City of Ventura's General Plan Final EIR provides the following performance standard criteria for the City's circulation system (City of Ventura 2005b).

- **Performance Standard:**
  - Level of Service E (peak hour Intersection Capacity Utilization (ICU) less than or equal to 1.00) for freeway ramp intersections.
  - Level of Service D (peak hour ICU less than or equal to 0.90) for all other Principal Intersections*.
- **Threshold of Significance (for impact analyses):** For an intersection that is forecast to operate worse than its performance standard, the impact of a given project is considered to be significant if the project increases the ICU by more than 0.01. An ICU increase of more than .01 does not cause the threshold of significance to be exceeded if the with-project ICU does not exceed the maximum ICU value.

City of Ventura Code of Ordinances

The City of Ventura's Code of Ordinances establishes the city's truck route for vehicles exceeding a maximum gross weight of three and one-half tons. The Code of Ordinances also cites the following exceptions related to the CPUC (City of Ventura 2013):

- **Sec. 16.140.020. Weight limit; truck route.** This section shall not apply to any vehicle owned by a public utility or a licensed contractor while necessarily in use in the construction, installation, or repair of any public utility.

Santa Barbara County Comprehensive Plan, Circulation Element

The Santa Barbara County Comprehensive Plan Circulation Element establishes roadway and intersection standards for the unincorporated area of the County along with the methodology for project consistency determination. Santa Barbara County's Roadway Classification System includes seven roadway classes. The Circulation Element's policy capacity is expressed as average daily trips (ADTs) for each roadway class (see Table 4.15-7).

Table 4.15-7 Santa Barbara County's Policy Capacity for Roadway Classes

Roadway Class	Policy Capacity
Freeway	Four Lane Urban: 67,000 ADT Four Lane Rural: 44,000 ADT Six Lane Urban: 100,000 ADT Six Lane Rural: 67,000 ADT
Expressway	Urban: 50,000 ADT Rural: 33,000 ADT
Two Lane Expressway	Urban: 16,000 ADT Rural: 11,000 ADT
Arterial Road	30,000 ADT

Table 4.15-7 Santa Barbara County's Policy Capacity for Roadway Classes

Roadway Class	Policy Capacity
Major Road	20,000 ADT
Two Lane Major Road	10,000 ADT
Collector Road	5,000 ADT

Source: Santa Barbara County 2010

The policy capacities for each roadway classification are used as guidelines to determine a project's consistency with the Circulation Element. A project's consistency is determined by the following roadway performance standards (Santa Barbara County 2010):

- A project that would contribute ADTs to a roadway where the Estimated Future Volume does not exceed the policy capacity would be considered consistent with this section of this Element.
- For roadways where the Estimated Future Volume exceeds the policy capacity but does not exceed the Acceptable Capacity, a project would be considered consistent with this section of this Element only if the number of ADTs contributed by the project to the roadway was less than or equal to 2 percent of the remaining capacity of that roadway or 40 ADT, whichever is greater.
- For roadways where the Estimated Future Volume exceeds the acceptable capacity but does not exceed Design Capacity, a project would be considered consistent with this section of this Element only if the number of ADTs contributed by the project to the roadway does not exceed 25 ADT.
- For roadways where the Estimated Future Volume exceeds the design capacity, a project would be consistent with this section of this Element only if the number of ADTs contributed by the project to the roadway does not exceed 10 ADT.

Santa Barbara County intersection standards include the following (Santa Barbara County 2010):

- Projects contributing peak hour trips to intersections that operate at an Estimated Future Level of Service that is better than LOS C shall be found consistent with this section of this Element unless the project results in a change in V/C (volume/capacity) ratio greater than 0.20 for an intersection operating at LOS A or 0.15 for an intersection operating at LOS B.
- For intersections operating at an Estimated Future Level of Service that is less than or equal to LOS "C", a project must meet the following criteria in order to be found consistent with this section of this Element.
  - For intersections operating at an Estimated Future Level of Service C, no project must result in a change of V/C ratio greater than 0.10.
  - For intersections operating at an estimated future Level of Service D, no project shall contribute 15 or more Peak Hour Trips.
  - For intersections operating at an Estimated Future level of Service E, no project shall contribute 10 or more Peak Hour Trips.
  - For intersections operating at an Estimated Future Level of Service F, no project shall contribute 5 or more Peak Hour Trips.

- Where a project's traffic contribution does not result in a measurable change in the V/C ratio at an intersection but does result in a finding of inconsistency with Intersection Standard 2 above, intersection improvements that are acceptable to the Public Works Department shall be required in order to make a finding of consistency with these intersection standards. A measurable change in V/C ratio shall be defined as a change greater than or equal to 0.01.
- Where a project's traffic contribution does result in a measurable change in V/C ratio and also results in a finding of inconsistency with Intersection Standards 1 or 2, above, intersection improvements that are sufficient to fully offset the change in V/C ratio associated with the project shall be required in order to make a finding of consistency with these intersection standards.
- The above intersection standards shall also apply to all projects which generate Peak Hour Trips to intersections within incorporated cities that are operating at levels of service worse than those permitted by the city's Circulation Element.

The Santa Barbara County Comprehensive Plan Circulation Element outlines the following policies related to levels of service and alternative modes of transportation (Santa Barbara County 2010):

- **Policy A:** The roadway classifications, intersection levels of service, and capacity levels adopted in this Element shall apply to all roadways and intersections within the unincorporated area of the County, with the exception of those roadways and intersections located within an area included in an adopted community area plan.
- **Policy C:** The County shall continue to develop programs that encourage the use of alternative modes of transportation including, but not limited to, an updated bicycle route plan, park and ride facilities, and transportation demand management ordinances.

Santa Barbara Environmental Thresholds

The Santa Barbara County Environmental Thresholds and Guidelines Manual also establish threshold criteria for analysis of potential traffic impacts of proposed project. The intersection standards reflect the County's thresholds stated in the Santa Barbara County Comprehensive Plan Circulation Element.

a. The addition of project traffic to an intersection increases the volume to capacity (V/C) ratio by the value provided below or sends at least 5, 10 or 15 trips to at LOS F, E or D.

Table 4.15-8 Santa Barbara County Intersection Thresholds

LEVEL OF SERVICE (including project)	INCREASE IN V/C GREATER THAN
A	0.20
B	0.15
C	0.10
Or The Addition Of:	
D	15 trips
E	10 trips
F	5 trips

Additional threshold criteria listed in the Santa Barbara County Environmental Thresholds and Guidelines Manual include:

> **b.** Project access to a major road or arterial road would require a driveway that would create an unsafe situation or a new traffic signal or major revisions to an existing traffic signal.
>
> **c.** Project adds traffic to a roadway that has design features (e.g., narrow width, road side ditches, sharp curves, poor sight distance, inadequate pavement structure) or receives use which would be incompatible with substantial increases in traffic (e.g., rural roads with use by farm equipment, livestock, horseback riding, or residential roads with heavy pedestrian or recreational use, etc.) that will become potential safety problems with the addition of project or cumulative traffic. Exceedance of the roadways designated Circulation Element Capacity may indicate the potential for the occurrence of the above impacts.
>
> **d.** Project traffic would utilize a substantial portion of an intersection(s) capacity where the intersection is currently operating at acceptable levels of service (A-C) but with cumulative traffic would degrade to or approach LOS D (V/C 0.81) or lower. Substantial is defined as a minimum change of 0.03 for intersections which would operate from 0.80 to 0.85 and a change of 0.02 for intersections which would operate from 0.86 to 0.90, and 0.01 for intersections operating at anything lower.

Project modifications or construction of improvements are required if the thresholds are exceeded to reduce the levels of significance to insignificant (Santa Barbara County 2008).

Santa Barbara County Code of Ordinances

Chapter 28, Roads, Article I Excavations and Encroachments regulates and controls all secondary uses of county roads in order to protect and preserve the primary purpose and public use of such roads. Article I provides information on encroachment permits, protection of traffic, and traffic routing measures among other encroachment details (Santa Barbara County 2012).

Ventura County General Plan, Transportation/Circulation Section

The Ventura County Transportation/Circulation section of the General Plan identifies goals, policies, and programs related to roadways, transit, rail, airports, and pipelines. The Ventura County General Plan Transportation/Circulation section outlines the following goals and policies related to levels of service and alternative modes of transportation (Ventura County 2011):

- **Goal 2:** Facilitate the safe and efficient movement of persons and goods by designing, constructing, and maintaining a *Regional Road Network* and *Local Road Network* that is consistent with the County road standards and that will function at an acceptable *Level of Service (LOS).*
- **Goal 7:** Promote the expansion of a safe, efficient, convenient, integrated and economical community, intercommunity and countywide bus transit system.
- **Goal 8.** Encourage transit providers and the Ventura County Transportation Commission to increase ridership and meet the needs of the commuting public and the special transportation needs of the elderly, school children, low income, physically handicapped, other low mobility groups, and bicyclists.

- **Goal 9:** Encourage the use of bicycling and ridesharing (e.g., carpooling, vanpooling, and bus pooling) as a percentage of total employee commute trips throughout the County in order to reduce vehicular trips and miles traveled and consequently vehicular emissions, traffic congestion, energy usage, and ambient noise levels.
- **Goal 10:** In cooperation with the ten cities and the Ventura County Transportation Commission, plan a system of bicycle lanes and trails linking all county cities, unincorporated communities, and CSUCI.
- **Policy 3.** The minimum acceptable Level of Service (LOS) for road segments and intersections within the Regional Road Network and Local Road Network shall be as follows:
  - LOS-'D' for all County thoroughfares and Federal highways and State highways in the unincorporated area of the County, except as otherwise provided in subparagraph (b);
  - LOS-'E' for State Route 33 between the northerly end of the Ojai Freeway and the City of Ojai, Santa Rosa Road, Moorpark Road north of Santa Rosa Road, State Route 34 north of the City of Camarillo and State Route 118 between Santa Clara Avenue and the City of Moorpark;
  - LOS-'C' for all County-maintained local roads; and
  - The LOS prescribed by the applicable city for all Federal highways, State highways, city thoroughfares and city-maintained local roads located within that city, if the city has formally adopted General Plan policies, ordinances, or a reciprocal agreement with the County (similar to Policies 4.2.2-3 through 4.2.2-6) respecting development in the city that would individually or cumulatively affect the *LOS* of *Federal highways, State highways, County thoroughfares* and County-maintained *local roads* in the unincorporated area of the County.
  - At any intersection between two roads, each of which has a prescribed minimum acceptable *LOS*, the lower *LOS* of the two shall be the minimum acceptable *LOS* for that intersection.
- **Policy 4.** Except as otherwise provided in the Ojai Area Plan, County General Plan land use designation changes and zone changes shall be evaluated for their individual and cumulative impacts, and discretionary development shall be evaluated for its individual impact, on existing and future roads, with special emphasis on the following:
  - Whether the project would cause existing roads within the Regional Road Network or Local Road Network that are currently functioning at an acceptable LOS to function below an acceptable LOS;
  - Whether the project would add traffic to existing roads within the Regional Road Network or the Local Road Network that are currently functioning below an acceptable LOS; and
  - Whether the project could cause future roads planned for addition to the Regional Road Network or the Local Road Network to function below an acceptable LOS.

Segments 1 and 2 and the Casitas substation are located with the Ojai Area Plan which provides the following goals and policies relates to levels of service and alternative modes of transportation (Ventura County 2008).

- **Goal 2.** Encourage alternatives to single occupancy motor vehicle trips by promoting carpools, vanpools and expanded bus service.
- **Policy 2.** For the area covered by this plan, the minimum acceptable Level of Service (LOS) for road segments and intersections within the Regional Road Network and Local Road Network shall be as follows:
  - LOS - 'D' for all County thoroughfares and State highways within the unincorporated area of the County, except as otherwise provided in Subparagraph (b);
  - LOS - 'E' for Highway 33 between the end of the freeway and the City of Ojai;
  - LOS - 'C' for all County maintained local roads; and
  - The LOS prescribed by the City of Ojai's General Plan for all city thoroughfares and city-maintained local roads located within that city, if the city has formally adopted policies (similar to Policies 4.1.2-2 through 4) respecting discretionary development in the city that would affect the LOS of County thoroughfares, County-maintained local roads, and State highways within the unincorporated area of the County.
  - At any intersection between two roads, each of which has prescribed minimum acceptable LOS, the lower LOS of the two shall be the minimum acceptable LOS for that intersection.
- **Program 5.** The Ojai Valley Trail will continue to be maintained and should be extended where possible.
- **Program 6.** The County Public Works Agency will meet with CALTRANS officials to discuss the establishment of a restriction on truck traffic on the Highway 33 corridor during peak traffic hours.

Ventura County Code of Ordinances

Division 12, Highway Encroachments is the County's Encroachment Ordinance that provides information on applications for and the issuance of construction, excavation, encroachment, and moving permits on County highways. Encroachment and closure of County highways "shall be planned and executed in such a manner that they will not unreasonably interfere with the safe and convenient travel of the general public" (Section 12152) (Ventura County 2012.)

4.15.3 Impact Analysis

4.15.3.1 Methodology and Significance Criteria

Potential impacts related to traffic and transportation were evaluated according to the following significance criteria. The criteria were defined based on the checklist items presented in Appendix G of the CEQA Guidelines. The proposed project would cause a significant impact related to traffic and transportation if it would:

1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
5. Result in inadequate emergency access?
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

4.15.3.2 Applicant Proposed Measures

No Applicant Proposed Measures have been provided for Transportation.

4.15.3.3 Environmental Impacts and Mitigation Measures

Construction Overview

Traffic impacts related to construction of the proposed 66-kV subtransmission line segments, existing substation modifications, and installation of new telecommunication infrastructure would be similar in most cases and are discussed together in each of the following impact analyses except where impacts would be specific to a particular project component. Most impacts would result from construction and modification of the 66-kV subtransmission line segments because of the number of workers required and activity that would require travel to several of the designated staging yards. Construction-related impacts are not anticipated for the installation of upgraded line protection relay equipment within the existing Getty, Goleta, Ortega, and Santa Barbara substations due to the small amount of work required. Therefore, these substations are not discussed further. The proposed project would cause short-term, temporary construction-related impacts where the proposed 66-kV subtransmission line segments cross roadways and where construction would be conducted within a public ROW. As proposed, the 66-kV subtransmission line segments cross SR-192 in three locations, SR-150 in 10 locations, and SR-33 in one location. Even though the proposed project is located primarily in rural areas where there is limited transportation infrastructure, a series of local roads are also located adjacent to or are crossed by the 66-kV subtransmission line segments. Since the construction of the various project components would occur over a dispersed area, different local roads along the route would be impacted at different times during construction.

Construction of the proposed project would result in a temporary increase in traffic volumes on the regional highways and local roadways that provide access to the construction area. Traffic would be generated by construction worker commute trips and material deliveries. Hauling materials, such as poles, concrete, conductor, excavation spoils, and removed poles, would temporarily increase existing traffic volumes along the proposed route of the 66-kV subtransmission line segments and roadways used to access the construction area and staging yards.

SCE estimates that during the 24-month construction period, the daily workforce would include as many as 105 workers on a peak day of construction, e.g., if multiple components of the proposed project were being constructed simultaneously). SCE would use one or more of the eight staging

areas identified in Chapter 2, "Project Description," as reporting locations for workers, vehicle and equipment parking, and material storage. The applicant's actual sequencing/phasing of construction activities is unknown at this time; therefore, the routes that construction and personal vehicles may follow will not be known until construction schedules/sequencing are finalized. Therefore, for the purposes of this analysis the area of influence is considered to include both Santa Barbara and Ventura Counties in areas adjacent to the proposed project. The applicant also identified the major roadways and intersections that may be utilized during construction (and operation) of the proposed project (see Tables 4.15-4 and 4.15-5 for additional information). The applicant identified 182 maximum total daily vehicle trips could occur during the course of the project; however, the actual number of daily vehicle trips and peak hour trips may be lower. Since the area of influence includes both Santa Barbara and Ventura Counties, it is assumed that trips are dispersed throughout the project area with half of the workers originating in Santa Barbara County and half of the workers originating in Ventura County. The applicant identified a maximum total of 44 AM and 44 PM peak vehicle trips during the construction period, which would be dispersed throughout the project area.

Operation and Maintenance Overview

Operational impacts would be negligible as operation and maintenance of the proposed project would be similar to current operation conditions. The proposed project would require minimal maintenance and would not require more than a few vehicles for operation and maintenance activities. All substations associated with the proposed project are, and would continue to function as, remotely controlled substations. No permanent vehicles would be stationed at any substation. Substation operators perform station inspections in unstaffed substations when there is any indication of trouble; therefore, SCE personnel visits to the substations would be infrequent. SCE inspects the 66-kV subtransmission at least once per year either by flying or driving the line routes, but usually more frequently based on system reliability. Normal operation of the lines would be controlled remotely through the applicant's control systems, and manually in the field as required. Emergency repairs to the 66-kV subtransmission lines may occasionally be required. Routine access and spur road maintenance would be conducted on an annual basis as needed. Regular tree pruning would be performed in compliance with existing state and federal laws, rules, and regulations. Operation and maintenance-related helicopter activities could include transportation of workers, delivery of equipment and materials to structure sites, structure placement, hardware installation, and conductor or telecommunications cable stringing operations. The telecommunication equipment would also be subject to routine inspection and maintenance and repair activities on an as-needed or emergency basis. Most regular operation and maintenance activities of telecommunication equipment would be performed at substations.

Impact TT-1: Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

LESS THAN SIGNIFICANT WITH MITIGATION

Impacts on traffic within the area of influence, including the City of Carpinteria, the City of Ventura, and Santa Barbara and Ventura Counties were determined using the thresholds of significance included in the following documents. Santa Barbara and Ventura County Congestion Management Programs are discussed under Impact TT-2.

- City of Carpinteria General Plan, Circulation Element
- City of Carpinteria's Environmental Review Guidelines
- City of Ventura's General Plan Final EIR
- Santa Barbara County Comprehensive Plan Circulation Element
- Santa Barbara County Environmental Thresholds and Guidelines Manual
- Ventura County Transportation/Circulation Section of the General Plan

The City of Carpinteria General Plan Circulation Element identifies the threshold of significance for projects contributing peak hour trips to intersections as outlined above in Section 4.15.2.3. As stated in the Construction Overview, a maximum total of 44 vehicle trips could occur during both the AM and PM peak hours in Santa Barbara County on any given day during the construction period. However, the significance criteria in the City of Carpinteria General Plan Circulation Element do not apply to temporary traffic impacts that result during construction (Goggia pers. comm. 2013; Ebeling pers. comm. 2013).

The City of Carpinteria's Environmental Review Guidelines establishes a threshold criterion that assumes that an increase in traffic that creates a need for road improvements is substantial. The temporary increase in traffic during construction of the proposed project would not result in permanent impacts that would require road improvements. The proposed project would not be considered substantial under the City of Carpinteria's Environmental Review Guidelines.

The City of Ventura's General Plan Final EIR establishes performance criteria for the City of Ventura's circulation system. The minimum performance standard is LOS E for freeway ramp intersections and LOS D for all other Principal Intersections within the City's circulation system. The key intersections located in the City of Ventura identified by the applicant as likely to be used during construction of the proposed project operate between LOS A and C during the AM and PM peak hours (see Table 4.15.5). Therefore, since none of the intersections are expected to operate below the established performance standards, the proposed project would have a less than significant impact.

The Santa Barbara County Comprehensive Plan Circulation Element and the Santa Barbara County Environmental Thresholds and Guidelines Manual outline threshold criteria for roadways and intersections within the County. The threshold criterion for roadways states that projects that would contribute average daily trips to a roadway where the Estimated Future Volume does not exceed the policy capacity would be considered consistent with this section of this Element. The proposed project would temporarily generate 182 maximum total daily vehicle trips during construction; therefore, it is not expected that the Estimated Future Volume would exceed the policy capacity on unincorporated County Roadways.

The Ventura County Transportation General Plan Circulation section establishes the minimum acceptable LOS for road segments and intersections within the County's Regional and Local Road Network. The minimum LOS is LOS D for all County thoroughfares and federal and state highways in the unincorporated area of the County and LOS C for all County-maintained local roads. The key roadways located in the County of Ventura identified by the applicant as likely to be used during construction of the proposed project operate between LOS A and D (U.S. 101 and SR-126) during the AM and PM peak hours (see Table 4.15.3). As stated in the Construction Overview, a maximum total of 44 vehicle trips could occur during both the AM and PM peak hours on any given day during

the construction period. These trips would be dispersed throughout the project area. Therefore, the temporary additional peak hour trips are not expected to cause existing roads within the Regional or Regional Road Network that are currently functioning at an acceptable LOS to function below an acceptable LOS.

The proposed project would cause short-term, temporary construction-related impacts where the proposed 66-kV subtransmission line segments cross roadways and where construction would be conducted within a public ROW. As stated in the Construction Overview, the 66-kV subtransmission line segments cross SR-192 in three locations. Segment 3A crosses SR-192 at the intersections of Route 224 in the City of Carpinteria, Lillington Canyon Road, and Shepard Mesa Drive. Segment 3B crosses SR-150 as it connects with Segment 3A approximately 0.1 miles northeast of the intersection with SR-192 in Santa Barbara County. Segment 4 runs adjacent to SR-150 and crosses the road nine times within Ventura County. Segment 1 crosses SR-33 as it enters the Casitas Substation which is located along SR-33 approximately 0.7 miles north of the Casitas Vista Road intersection. Temporary lane closures and/or travel lane reductions would be required for the construction of the 66-kV subtransmission line segments where they cross a roadway and could temporarily impact the performance of the circulation system. MM TT-1 requires the applicant to prepare a traffic control plan to address potential significant transportation conflicts created from road/lane closures. The implementation of MM TT-1 would reduce potential significant impacts from road closures to less than significant.

The City of Carpinteria, City of Ventura, and Santa Barbara and Ventura Counties encourage use and development of multiple modes of transportation including public transit and bicycles. However, LOS standards have not been adopted for these modes of transportation, thus a qualitative assessment of impacts on these facilities is not possible. In general, the proposed project would not conflict with policies governing these facilities. While construction of certain proposed project components could affect bicycle infrastructure and public transit (see discussion under Impact TT-6), any impact on these facilities would be short term and temporary and would not conflict with any applicable plan, ordinance, or policy.

As stated in the Operation and Maintenance Overview, operation and maintenance of the proposed project would be similar to current operation conditions; therefore, operation activities would not conflict with any applicable plans, ordinances, or policies.

Impact TT-2: Conflict with an applicable congestion management program including, but not limited to, LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
LESS THAN SIGNIFICANT

The SBCAG is the Congestion Management Agency for the County and establishes the CMP. The Santa Barbara County CMP states that projects that have a total generation that exceeds 500 average daily trips or 50 peak hour trips should be evaluated for potential impacts to the CMP system. For the purposes of this analysis it is assumed that a maximum total of 44 vehicle trips could temporarily occur during both the AM and PM peak hours in Santa Barbara County on any given day during the construction period. The proposed project would temporarily generate 182 maximum total daily vehicle trips during construction. Therefore, the proposed project would not add more than 50 trips during either the AM or PM peak hours, nor would it add more than 500 average daily trips on the Santa Barbara CMP network. Additionally, it was determined that the significance threshold would not apply to temporary increases to traffic during construction of the

proposed project (Orfila pers. comm. 2013). Therefore, impacts on the Santa Barbara County CMP would be less than significant.

The VCTC is the Congestion Management Authority for Ventura County and establishes the CMP. The proposed project would generate no more than 44 vehicle trips in both the AM and PM peak periods during construction; therefore, it does not meet the 200 trip threshold that would require it to undergo a Project-Level Impacts analysis according to the Ventura County CMP. No additional trips would be generated during operation of the proposed project because operation and maintenance activities would be similar to current conditions.

Because the proposed project does not meet the requirements for further evaluation according to either the Santa Barbara or Ventura County CMP networks, it would not conflict with an applicable congestion management program. Therefore, impacts under this criterion would be less than significant.

Impact TT-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
LESS THAN SIGNIFICANT WITH MITIGATION

Three public airports—the Oxnard, Camarillo, and Santa Barbara Municipal Airports—are located within the vicinity of the proposed project. In addition, there is a private airport located in Santa Paula, east of the Santa Clara Substation. Helicopters would be used for construction work associated with transportation of construction workers, delivery of equipment and materials to structure sites, structure placement, hardware installation, conductor and telecommunications cable stringing operations, and installation of marker balls. Helicopters may be based at a local airport at night or on off days. Fifteen proposed helicopter fueling and landing areas would be located along access and spur roads along Segments 1, 2, and 4. These landing zones would support construction, potential helicopter refueling, and emergency landings. If helicopters are used during construction, they would be used in accordance with SCE's specifications, which are similar to the methods detailed in Institute of Electrical and Electronic Engineers (IEEE) 951-1996 standard, *Guide to the Assembly and Erection of Metal Transmission Structures*, Section 9, Helicopter Methods of Construction.

As discussed above in Section 4.15.2.1, SCE may need to submit a Congested Area Plan to the FAA 30 to 60 days prior to start of construction for helicopter external-load operations over populated areas or areas congested with structures or objects. The FAA requires that all pilots, and crewmembers, and helicopters involved with external-load operations (e.g., lattice steel tower erection and wire stringing) be certified pursuant to 14 CFR 133 (External-Load Operations). Pursuant to FAA and OSHA requirements, briefings must be completed prior to each day of helicopter operation regarding the plan of operation for the pilot and all ground personnel. Additionally, cargo hooks used for securing helicopter external loads must be tested electrically and mechanically prior to each day of operation. Accidents and incidents associated with helicopter use must be reported immediately to the National Transportation Safety Board.

Although SCE would operate and use helicopters for construction of the proposed project according to internal standards based on IEEE Standard 951-1996, and the FAA would certify and inspect all pilots, mechanics, crewmembers, and helicopters, accidents or incidents at job sites could still occur. MM TT-2 would ensure that workers involved in construction activities that receive loads from helicopters or assist with loading helicopters are routinely trained to identify potentially unsafe conditions associated with helicopter external load size, attachment means, or

loading/unloading methods. MM TT-3 would require the applicant to notify the Van Nuys Flight Standards District Office and the surrounding public at least one week in advance of all days during which helicopter operations are planned to occur. With implementation of MM TT-2, and MM TT-3, impacts under this criterion would be less than significant.

Impact TT-4: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
LESS THAN SIGNIFICANT WITH MITIGATION

The proposed project would not require the construction of publicly accessible roads that would present a substantially hazardous design feature such as sharp curves or dangerous intersections. In addition, the proposed project would not introduce incompatible uses to area roadways (e.g., farm equipment). Approximately 120 miles of existing access and spur roads would be utilized during construction of the proposed project. In addition, approximately 4 miles of new spur roads would be constructed as part of the proposed project. All proposed project access and spur roads, except for a portion of Segment 4 access roads that overlap with the recently completed Franklin Trail, would be located on private land and would be accessible only to the private land owner, fire maintenance vehicles (in some cases), and SCE for construction and maintenance activities to the 66-kV subtransmission segments. Therefore, except for a portion of Segment 4 access roads, the access and spur roads would be restricted from public access. It is also anticipated that the roads would be designed to avoid hazardous features for the safety of operation and maintenance crews. As noted in Section 2.3.2.1 "Access and Spur Roads," the construction of new spur roads would typically be 18 feet wide, with up to 2-foot-wide shoulders on each side of the road to stabilize road edges beyond the drivable width. Generally, the grade of access and spur roads would not exceed 12 percent; however, in certain cases grades could reach approximately 14 percent. For grades exceeding 12 percent, these would not exceed 40 feet in length and would be located more than 50 feet from any other excessive grade or any curve. All curves would have a radius of curvature not less than 50 feet, measured along the center line of the usable road surface. As a result, there would be no impact because the proposed project access roads would not substantially increase hazards due to a design feature.

The delivery of specific project components, such as the lattice steel towers, would require the use of oversize and/or overweight vehicles. A transportation permit would be required on all vehicles exceeding the size and weight of a legal load, as defined by the California Vehicle Code. The permits would be obtained from the cities of Ventura and Carpinteria and the counties of Santa Barbara and Ventura. Likewise, Caltrans has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight, and loading of vehicles. SCE would adhere to each jurisdiction's requirement and permitting process for the transport of oversize and/or overweight project components. Depending on the jurisdiction, the transportation permit or the Caltran's special permit, generally include conditions such as the requirement to display a "wide load" warning sign, use designated truck routes and repair of any damage to roadways/structures resulting from travel, include a pilot vehicle and/or prohibit movement during darkness and during inclement weather. The applicant would also implement MM TT-1, Traffic Control Plan, during project construction to minimize short-term, construction-related impacts on local traffic and reduce potential traffic safety hazards through measures such as the installation of temporary warning signs at strategic locations near access points for the project components. Therefore, the proposed project would not substantially increase hazards due to a design feature or incompatible use and impacts would be less than significant under this criterion.

Impact TT-5: Result in inadequate emergency access.
LESS THAN SIGNIFICANT WITH MITIGATION

The proposed project is primarily located in the rural, mountainous areas of Santa Barbara and Ventura Counties and the majority of the 66-kV subtransmission line segments would be reachable through access and spur roads during construction. There are few residences located in the mountains of the project area. A cluster of residences are located in the City of Carpinteria foothills in proximity to Segment 4. The proposed project would cause short-term, temporary construction-related impacts where the proposed 66-kV subtransmission line segments cross roadways and where construction would be conducted within a public ROW. As mentioned in the Construction Overview, the 66-kV subtransmission line segments cross SR-192 in three locations, SR-150 in 10 locations, and SR-33 in one location. Temporary lane closures and/or travel lane reductions would be required for the construction of the 66-kV subtransmission line segments where they cross a roadway. A series of local roads are also located adjacent to or crossed by the 66-kV subtransmission line segments.

The applicant would implement MM TT-1, Traffic Control Plan, during project construction to minimize short-term construction-related impacts on local traffic, including emergency access. Under the traffic control plans, construction activities would be coordinated with the affected local agencies in order to prevent closure of any emergency access route. Flaggers may briefly hold traffic back for construction equipment, but emergency vehicles would be provided access even in the event of temporary road closures. As a result, temporary road and lane closures associated with construction activities would not significantly lengthen the response time required for emergency vehicles passing through the construction zone because all streets would remain open to emergency vehicles at all times.

In places where proposed project components would require lane closures and/or travel lane reductions, construction activities would also coordinate with local jurisdictions in order to avoid closure of any emergency access route. Traffic control plans would also be submitted to all affected jurisdictions for review and approval prior to conducting construction activities. To ensure that the Traffic Control Plan reduces traffic impacts related to temporary lane closures, MM TT-1 would require SCE to confer with the City of Carpinteria traffic engineer and to incorporate their recommendations into the project Traffic Control Plan prior to commencing work within City of Carpinteria city boundaries.

In addition, each of the proposed 66-kV subtransmission line tower sites would be designed for 24-hour vehicular access during operation of the proposed project for emergency and maintenance activities.

Measures included under MM TT-1, Traffic Control Plan, would ensure that construction activities would not interfere with emergency response by ambulance, fire, paramedic, and police vehicles at locations where subtransmission line stringing activity would occur over county and city roads. Travel routes for emergency vehicles would remain unobstructed and adequate during both construction and operation phases of the proposed project. As stated in the Operation and Maintenance Overview, operation and maintenance activities of the proposed project would be similar to current operation conditions. Therefore, proposed project construction and operation activities would not result in inadequate emergency access and impacts would be less than significant.

Impact TT-6: Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

LESS THAN SIGNIFICANT WITH MITIGATION

Bikeway segments would be located adjacent to Segments 1 through 3B, Carpinteria Substation, Casitas Substation, and Staging Yard 1. A Class III bikeway where a bike route is indicated by sign only is located along SR-192 in proximity to the Carpinteria Substation and adjacent to Segments 3A and 3B. A Class II bikeway where the bike route is marked with an on-street painted bike lane is located on W. Stanley Avenue in the City of Ventura adjacent to Staging Yard 1. The Ojai Valley Trail is a multipurpose trail and Class 1 bikeway where the path is separate from automobile traffic. The Ojai Valley Trail parallels SR-33 in Ventura County and would be crossed by Segment 2. The first phase of the Franklin Trail was recently completed and is open to the public. The northern terminus of the first phase of the trail overlaps with the existing SCE access road.

Pedestrian and bicycle circulation may temporarily be affected by construction activities, including utility pole installation and line stringing. Construction activities, however, are not expected to impede pedestrian or bicyclist movement such that no suitable alternative routes would be available. As part of MM TT-1 the applicant would be required to implement traffic control measures that are consistent with those published in the California Joint Utility Traffic Control Manual (California Inter-Utility Coordinating Committee 2010). Measures identified in the manual are applicable to all roadways users including motorists, bicyclists, and pedestrians. The Manual, for example, recommends that pedestrians be provided with reasonably safe, convenient, and accessible paths that replicate as nearly as possible the most desirable characteristics of the existing paths. Traffic control measures would apply specifically to temporary disruptions to the Class III bikeway along SR-192 due to the construction of Segments 3A and 3B adjacent to the route and the Ojai Valley Trail during the construction of the Segment 2 portion that crosses the trail. The applicant would also implement MM TT-4, Trail Repair, to ensure that any damage done to area trails, resulting from construction work would be repaired following completion of project construction.

The Santa Barbara County Comprehensive Plan Circulation Element Policy C promotes the continued development of alternative modes of transportation. The Ventura County General Plan Circulation Element Goals 9 and 10 encourage the use of bicycling and ridesharing and Program 5 ensures the maintenance of the Ojai Valley Trail. The proposed project, however, would only affect pedestrian and bicycle facilities temporarily during construction, and effects would occur for a relatively short period at any one location as utility structures are installed incrementally along the proposed routes. Therefore, the proposed project would not conflict with adopted policies, plans, or programs regarding bikeways or pedestrian facilities or otherwise substantially decrease the performance or safety of these facilities.

Since the proposed project is primarily located in the rural, mountainous areas of Santa Barbara and Ventura Counties there are no bus and other mass transit options located along the majority of the project route. Gold Coast Transit bus route 16 runs along SR-33 in the vicinity of Staging Yard 1, Segments 1 and 2, and the Casitas Substation. Construction of Route 1 as it enters the Casitas Substation would necessitate temporary lane reductions and closures on SR-33 that could temporarily affect Gold Coast Transit bus route 16 service; however, any potential service disruptions would be temporary and would not conflict with adopted policies, plans, or programs regarding public transit or otherwise substantially decrease the performance or safety of such facilities. In addition, as part of MM TT-1 the applicant would be required to implement traffic

control measures during potential lane reductions and closures along SR-33. Therefore, impacts under this criterion would be less than significant.

4.15.4 Mitigation Measures

MM TT-1: Traffic Control Plan. The applicant shall prepare Traffic Control Plan in accordance with the latest version of the California Joint Utility Traffic Control Manual prior to commencement of construction activities (California Inter-Utility Coordinating Committee 2010). The final Traffic Control Plan shall be implemented, as specified, throughout construction. The Traffic Control Plan shall be developed to minimize short-term construction-related impacts on local traffic (including motorists, bicyclists, and pedestrians) and potential traffic safety hazards, and shall include measures such as the installation of temporary warning signs at strategic locations near access locations for the project components. The signs shall be removed after construction-related activities are completed. The Traffic Control Plan would include, at a minimum, the measures listed below. The draft Traffic Control Plan shall be submitted to the regional office of the California Department of Transportation and applicable local jurisdictions for review and comment at least 60 days prior to the start of construction. The applicant shall address all agency comments prior to distributing the final Traffic Control Plan to all construction crew members prior to commencement of construction activities. Specifically, the Traffic Control Plan would include the following:

- Installation of traffic control devices as specified in the California Joint Utility Traffic Control Manual;
- Include a discussion of work hours, haul routes, work area delineation, traffic control and flagging;
- Identify all access and parking restriction and signage requirements;
- Require workers to park personal vehicles at approved staging areas and take only necessary project vehicles to the work sites;
- Coordination with the City of Carpinteria, City of Ventura, County of Santa Barbara, or County of Ventura on any temporary land or road closures within their jurisdictions. Layout plans for notifications and a process for communication with affected residents and landowners prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which roads/lanes and access point/driveways/parking areas would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints;
- To ensure that the Traffic Control Plan reduces traffic impacts related to temporary lane closures along SR-192, SR-150, SR-33, the applicant will confer with the affected jurisdiction's traffic engineers and incorporate the engineer's recommendations into the Traffic Control Plan prior to commencing work;
- The Traffic Control Plan would also be submitted to all affected jurisdictions for review and approval prior to conducting construction activities;
- Provisions for temporary alternate routes to route local traffic around construction zones;

- Delivery activities requiring extensive street use and temporary lane closures and/or lane reductions would be scheduled to occur during the off-peak hours to the extent feasible;
- Emergency service providers would be notified of the timing, location, and duration of construction activities. All roads would remain passable to emergency service vehicles at all times; and
- Identify all roadway locations where special construction techniques (e.g, night construction) would be used to minimize impacts to traffic flow.

MM TT-2: Helicopter Safety Plan and External-Load Training. Prior to start of construction, the CPUC must approve a Helicopter Safety Plan developed by SCE or its contractors if helicopters are to be used for any aspect of construction of the project. All workers that shall be present when helicopters are in use for construction of the project shall be trained regarding helicopter external loads. A sign-in sheet recording the names and dates of all individuals trained shall be maintained by SCE. Helicopter Safety Plan and Worker Environmental Awareness training shall include the following, at minimum:

- An overview of the general steps taken by the certified Rotorcraft External-Load Operators before starting operations, including a survey of the flight area; the typical ground worker instructions from certified Rotorcraft External-Load Operators; the ramp inspection checklist (14 CFR 133 Ramp Inspection Job Aid) and examples of typical causes of unsatisfactory ramp inspections; and the equipment typically required for Class A, B, C, and D loads as specified in 14 CFR 133;
- A summary of the contents of the FAA-approved Rotorcraft Load Combination Flight Manuals applicable to external-load operations planned for the project including maximum loads (internal and external) and load types and general performance capabilities, under approved operating procedures and limitations, for each type of helicopter to be used;
- Detailed instruction regarding the proper methods of loading, rigging, or attaching external loads and examples of improper rigging and resultant accidents and incidents; and
- Detailed information about planned helicopter construction techniques.

A safety brief, plan of operations, and refresher helicopter external-load operations training shall occur at the start of all days during which helicopter external-load operations are planned to occur. The planned flight paths, landing areas, and timing and types of helicopter construction activities for the day shall be presented. At minimum, the refresher training shall include examples load types and maximum loads (internal and external) for each type of helicopter to be used that day and a demonstration of proper external-load attaching and restraining means for all types of attaching and retraining devices that may be used.

No SCE personnel or contractor, including helicopter pilots and crewmembers, shall work in proximity to or be involved with helicopter external-load operations unless they receive the initial training and attend the daily safety brief and refresher training. Signatures of all personnel and contractors that attend the daily safety brief and refresher training shall be collected and clear indication on the worker (e.g., sticker on the hardhat color-coded by training day) shall be visible to indicate that the worker, pilot, or crewperson is approved to work in proximity to or otherwise be involved with helicopter external-load operations for the day. Copies of all sign-in sheets and a list of topics covered during training shall be submitted to the CPUC.

MM TT-3: Notification and Monitoring of Helicopter Use. SCE shall notify the Van Nuys Flight Standards District Office at least one week in advance of all days during which helicopter operations are planned to occur or as required by the Flight Standards District Office. In addition, SCE shall notify all residents, businesses, and owners of property within 0.25 miles of planned or emergency helicopter flight paths and landing areas at least one week in advance of all days during which helicopter operations are planned to occur.

In compliance with 14 CFR Part 133, the loading and unloading of all helicopter external loads shall be monitored by lineman (non-apprentice) certified by SCE to rig and inspect helicopter external loads.

All accidents or incidents reported to the National Transportation and Safety Board (NTSB) or FAA shall, at the same time of reporting, be reported to the CPUC. Near misses involving helicopters that had the potential to result in an accident or incident as defined by NTSB but do not require NTSB notification, shall be entered and described on a dated record by SCE and immediately reported to the applicant's safety coordinator and the CPUC.

MM TT-4: Repair of Damaged Trails. Prior to the start of construction, the applicant shall record the existing conditions of trails that could be physically damaged from the proposed construction activities. At the completion of construction, the applicant shall ensure that damage to existing trails as a direct result of activities related to construction of the proposed project components shall be repaired once construction is complete in accordance with local jurisdiction requirements and/or existing franchise agreements held by the applicant.

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