4.1 Aesthetics

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to aesthetics associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts related to aesthetics.

The aesthetics analysis describes the existing and proposed conditions of the aesthetic and visual quality in the Proposed Project Study Area, evaluates the aesthetic characteristics, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.1.1 Environmental Setting

The Proposed Project Study Area includes portions of the City of Tehachapi (including the downtown area) as well as portions of the Cummings Valley area.

The proposed telecommunication facilities would pass through the City of Tehachapi. The City of Tehachapi is a small community containing both rural and urban areas with a mix of residential, industrial, commercial, and agricultural land uses.

The Substation Study Area is located within the unincorporated Cummings Valley area of the Greater Tehachapi Area (GTA) in unincorporated Kern County, California. This region largely consists of sparsely populated rural and semirural communities. Land uses immediately surrounding the Substation Study Area are predominantly designated as agricultural land.

The proposed Banducci Substation site is situated within the relatively flat, circular-shaped Cummings Valley floor, at an elevation of approximately 3,800 feet above mean sea level (msl). Cummings Valley is surrounded on all sides by hills and low-lying mountain ranges, with an average elevation of 4,000 to 4,400 feet above msl.

The proposed Banducci Substation site is composed of approximately 6.3 acres situated on the northwesterly portion of an 80-acre parcel that is privately owned. The parcel is located on the southeast corner of Pelliser Road and unimproved Dale Road in unincorporated Kern County. The proposed Banducci Substation site was used in the past for agricultural purposes. The site is currently covered in a variety of vegetation and grass types.

Pelliser Road is the only paved, north-south connector road through the Cummings Valley. Pelliser Road is a two-lane road generally used for those traveling from the City of Tehachapi to the Stallion Springs residential community, which is located approximately 2.5 miles southwest of the Proposed Project.

The nearest sensitive receptor is a residence located approximately 0.25 mile south of the proposed Banducci Substation site. Figure 4.1-1A: Existing Context Photo and Key Observation Point Locations, Figure 4.1-1B: Existing Context Photo Locations, and Figure 4.1-2: Existing Context Photos, depict the existing conditions within the Proposed Project Study Area and the surrounding area.

Predominant Land Uses in the Region

The predominant land uses of the Proposed Project Study Area and surrounding region are agricultural and residential. Other land uses in the region include commercial and industrial uses among other related land uses.

Visible Infrastructure in the Area

The proposed Banducci Substation site and proposed subtransmission segments would be located in a largely undeveloped rural area with existing electrical and telecommunications poles and lines that follow various roads. The proposed telecommunication facilities would pass through both rural and urbanized areas as part of the Proposed Project.

There are approximately four residential structures located within 1 mile of the proposed Banducci Substation site as described in Table 4.1-1: Surrounding Residential Structures. The distance of these structures from the nearest proposed telecommunications facilities are also provided. These structures were identified using both geographic information system software and site reconnaissance. Of these four structures, the proposed Banducci Substation would potentially be visible to only one residence, which is located approximately 0.25 mile south of the proposed Banducci Substation site (see Figure 4.1-2: Existing Context Photos).

A State prison, the California Correctional Institution is located in an annexed portion of the incorporated City of Tehachapi, east of the proposed Banducci Substation site, and is slightly visible from the proposed Banducci Substation site.

There are also two residential communities located near the proposed Banducci Substation site: Bear Valley and Stallion Springs. Residences located in Bear Valley are approximately 1.5 miles northwest of the proposed Banducci Substation site. Stallion Springs is located southwest of the proposed Banducci Substation site. The nearest cluster of Stallion Springs residences are located more than 1 mile southwest of the proposed Banducci Substation site. The proposed Banducci Substation site is not visible from either of these residential areas due to the topography of the area.

Table 4.1-1: Surrounding Residential Structures

Structure Description	Structure Location	General Plan Land Use Type	Approximate Distance from Proposed Banducci Substation Site	Approximate Distance from Nearest Telecommunications Facilities
Single Family Residence	Eastern side of Pelliser Road (north of Banducci)	Resource Reserve (Min. 20 Acre Parcel Size)	0.25 mile south	270 feet west
Single Family Residence (used as office building for sod farm operation)	Northeast corner of Pelliser Road and Highline Road	Residential, Minimum 20 Gross Acres/Unit	0.50 mile north	See note below.
Single Family Residence	Southwest corner of Pelliser Road and Highline Road	Intensive Agriculture (Min. 20 Acre Parcel Size)	0.50 mile northwest	60 feet east
Single Family Residence and Dog Kennel	Highline Road and Bailey Road	Minimum 5 Gross Acres/Unit	0.70 mile northeast	30 feet north
Single Family Residence	Bailey Road and Baumbach Avenue	Minimum 20 Gross Acres/Unit	0.97 mile northeast	0.32 mile north
Single Family Residences	Various locations along the proposed telecommunications routes	Maximum 1 unit/net acre Minimum 2.5 Gross Acres/Unit Incorporated Cities	6 miles northeast	25 feet away from the components of both the Proposed Telecommunications Route 1 and 2 facilities

NOTE: The nearest telecommunication facilities are located along the western border of this property line.

Additional uninhabited commercial and agricultural structures, such as barns and storage bins, are located on the properties surrounding the proposed Banducci Substation site. However, these structures do not house potential receptors. Finally, the telecommunications and subtransmission components of the Proposed Project would be visible to individuals passing by the Proposed Project Study Area; however, these components would be situated along the existing telecommunications lines and routes in the area.

Presence of State Scenic Highways

State Scenic Highways are designated by the California Department of Transportation (Caltrans). There are no designated State Scenic Highways located in Kern County (Caltrans, 2011) and the Proposed Project would not be located near any such State Scenic Highway.

The proposed Banducci Substation would be located approximately 25 miles west of a portion of State Route (SR) 14, Aerospace Highway, which is an Eligible State Scenic Highway. The Proposed Telecommunications Route 1 would be located roughly 13 miles west of this same portion of SR 14.

The proposed Banducci Substation would also be located approximately 17 miles northwest of the portion of SR 58, Mojave-Barstow Highway, which is an Eligible State Scenic Highway (Caltrans, 2011). The Proposed Telecommunications Route 1 would be located roughly 13 miles northwest of this same portion of SR 58. Additionally, the nearest existing pole associated with the Proposed Project is located more than 12 and 14 miles west and northwest of the eligible segments of the noted State highways, respectively.

Scenic Vistas/Resources

Often, areas possess a unique historical, geographical, or other setting by which a site is regarded on a federal, State, or local level as being relevant to the character of that particular area. These unique areas have in turn been used by federal, State, and local agencies to classify a scenic vista or resource. The scenic vistas for this analysis are defined as open space or recreational areas that largely contain views of natural resources or features. Scenic resources can be built infrastructure, such as buildings, but also include areas with specific natural or historic resources. None of the Proposed Project components, including the proposed Banducci Substation, telecommunication, or subtransmission elements, would be located in an area that has been designated at a federal, State, or local level as containing "scenic vistas" or "scenic resources." Within Cummings Valley, no scenic vistas have been officially designated by the Kern County General Plan, Greater Tehachapi Area Specific and Community Plan (GTASCP), or Kern County Council of Governments (Kern County, 2009, 2010 and Kern County COG, 2004).

Although there are no officially designated scenic vistas or scenic resources within the Proposed Project Study Area, several areas located within the Proposed Project's region could be considered potentially scenic vistas. Two of these vistas are located within a 10 mile radius of the proposed Banducci Substation site and include: i) the Tehachapi Mountain Park, located approximately 7 miles southeast; and ii) segments of the Pacific Crest Trail, located approximately 10 miles southeast of the proposed Banducci Substation site. These vistas are not visible from the proposed Banducci Substation site. Furthermore, neither the proposed Banducci Substation, nor the proposed subtransmission segments, nor the proposed telecommunication facilities associated with the Proposed Project would be visible from any of these vistas as distance and the steep topography in the region provides a natural barrier between the Proposed Project and these vistas.

There are no State registered historic sites located within a 0.5-mile radius of the Proposed Project site.

Light and Glare

The proposed Banducci Substation site is uninhabited agricultural land and is not a source of light and glare. Scattered structures and residences, as well as the California Correctional

Institution, are located near the proposed Banducci Substation site and serve as sources of light and glare in the area.

There are existing residences, commercial buildings, and other structures along the proposed telecommunications routes that serve as sources of light and glare. Extended shadows are cast from the existing transmission poles that are located along the proposed telecommunications routes; however, these shadows are not considered a nuisance as they are largely located near transportation corridors and are located an adequate distance (i.e., a minimum of 300 feet) from residences or other receptors. Overall, light and glare within the Proposed Project Study Area is low, and light and glare within the Substation Study Area is minimal.

4.1.2 Regulatory Setting

The regulatory framework that is discussed in this section identifies the federal, State, regional, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to aesthetic resources.

4.1.2.1 Federal

The Proposed Project would not result in the disturbance or conversion of existing federally owned or operated park areas. Therefore, compliance with federal regulations, policies, plans, or guidelines was not considered in this aesthetics analysis.

4.1.2.2 State

California Streets and Highways Code

The California Scenic Highway Program preserves and protects scenic highway corridors from changes that would diminish the aesthetic value of these corridors. Caltrans designates scenic highway corridors and establishes the highways that are eligible for the program. The Streets and Highways Code includes a list of highways that are either eligible for designation or are designated as an "Officially Designated State Scenic Highway" (Caltrans, 2011). Currently, there are no Officially Designated State Scenic Highways within Kern County. As such, the Proposed Project site is not within the viewshed of any designated scenic highway.

The Scenic Highway Program identifies portions of SR 14 north of Mojave and SR 58 east of Mojave as "Eligible State Scenic Highways" (Caltrans, 2011). As previously noted, the Proposed Project site is located approximately 25 miles west and approximately 25 miles northwest of those portions of SR 14 and SR 58, respectively, that are listed as Eligible State Scenic Highway. The nearest proposed telecommunications facility is located 13 miles west and 13 miles northwest of the nearest Eligible State Scenic Highway portions of SR 14 and SR 58, respectively. Although the Proposed Project would not be visible from the eligible portions of these highways, and while these highways are not official State Scenic Highways, the Proposed Project's compliance or potential to interfere with the California Scenic Highway Program was considered in this analysis.

4.1.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County recognizes the importance of aesthetic resources and has developed policies to protect visually sensitive areas while minimizing impacts from the light and glare of new development projects in the Kern County General Plan (Kern County, 2009).

Kern County Zoning Ordinance

Section 19.81 of the Kern County Zoning Ordinance is titled the Outdoor Lighting Ordinance or "Dark Sky Ordinance." This ordinance provides principles for ensuring that the "natural dark skies" that are considered part of the existing character of Kern County are maintained (Kern County, 2011). The Dark Sky Ordinance states that "excessive illumination can create a glow that may obscure the night sky and excessive illumination or glare may constitute a nuisance" (Kern County, 2011).

Greater Tehachapi Area Specific and Community Plan

GTA is a term used to describe the collection of unincorporated communities located in eastern Kern County along SR 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTASCP that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

Environmental Intelligence. 05 April 2012. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_01_01A_Existing_Context_Photo_KOP_Location_EI01_20120405.mxd

Legend

- Proposed Banducci Substation (Site Alternative A)
- Site Alternative B
- X — Key Observation Point Location and Direction of View
- A-X — Existing Context Photo Location and Direction of View
- CA Correctional Institution

N W E S

0 500 1,000 2,000 Feet

Figure 4.1-1a: Existing Context Photo and Key observation Point Locations

Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Cumberland

Golden Hills

Westwood

Woodford Tehachapi

Golden Hills

Westwood

202

Tehachapi

A-13

Tehachapi

A-12

Valley

202

California Correctional Institution

Curry

Highline

A-15

A-14

Tucker

Dennison

Highline

Banducci Rd

Cheyenne

Proposed Banducci Substation

See Figure 4.1-1A

Banducci Rd

Tehachapi Mountain Park

Environmental Intelligence. 04 April 2012. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_01_01B_Existing_Context_Photo_Location_EI04_20120404.mxd

Legend

- Proposed Banducci Substation (Site Alternative A)
- Site Alternative B
- Freeway / Major Highway
- Major Road / Minor Highway
- Existing Context Photo Location and Direction of View (A-X)
- Existing Context Photos (see Fig 4.1-1A)
- CA Correctional Institution

N W E S

0 2,000 4,000 8,000 Feet

Figure 4.1-1B: Existing Context Photo Locations

Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

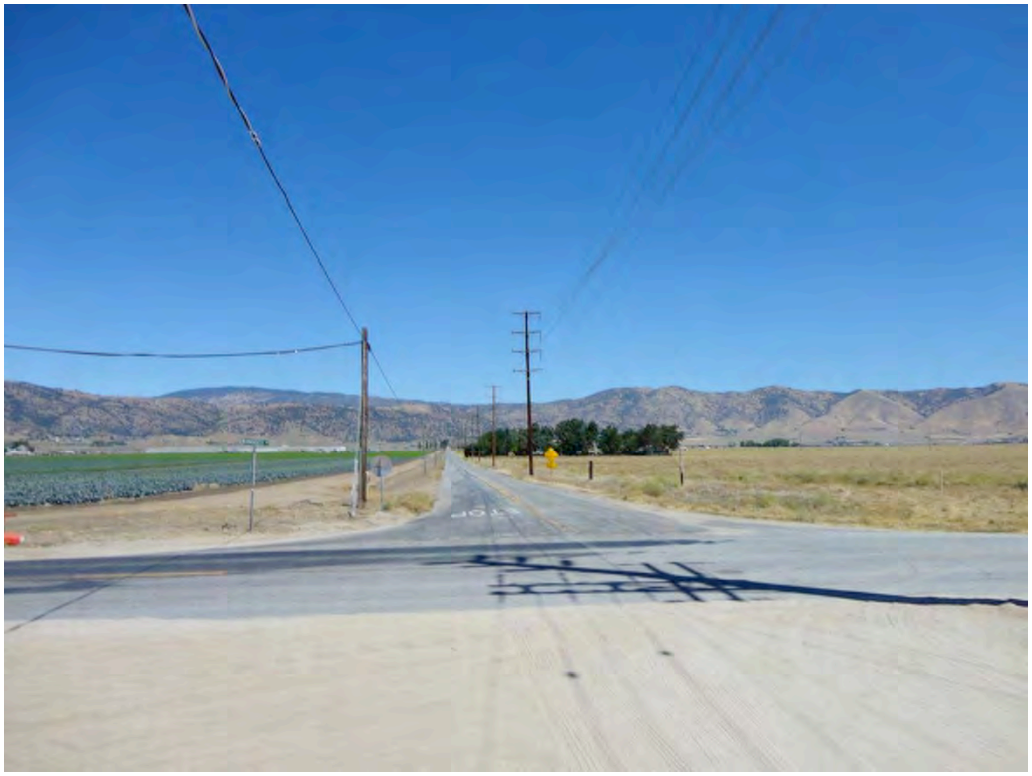


Photo A-01: View from intersection of Pelliser Road and Banducci Road facing north.

Photo A-02: View from the intersection of Pelliser Road and Dale Road toward the Site Alternative B location.

Photo A-03: View of the proposed Banducci Substation location facing southeast.

Photo A-04: View of the proposed Banducci Substation location facing south.

Photo A-05: View of Dale Road facing east from parcel north of proposed Banducci Substation location.

Photo A-06: View of the Site Alternative B location facing east from Pelliser Road.

Photo A-07: View of existing structure at the Site Alternative B location facing north.

Photo A-08: View of the Site Alternative B area and drainage creek from Highline Road facing southwest.

Photo A-09: View from the Site Alternative B location at Highline Road facing southwest toward Pelliser Road and residence.

Photo A-10: View from between Baumbach Avenue and Highline Road facing southwest toward the proposed Banducci Substation site and Site Alternative B location.

Photo A-11: View facing southwest from intersection of Bailey Road and Baumbach Avenue.

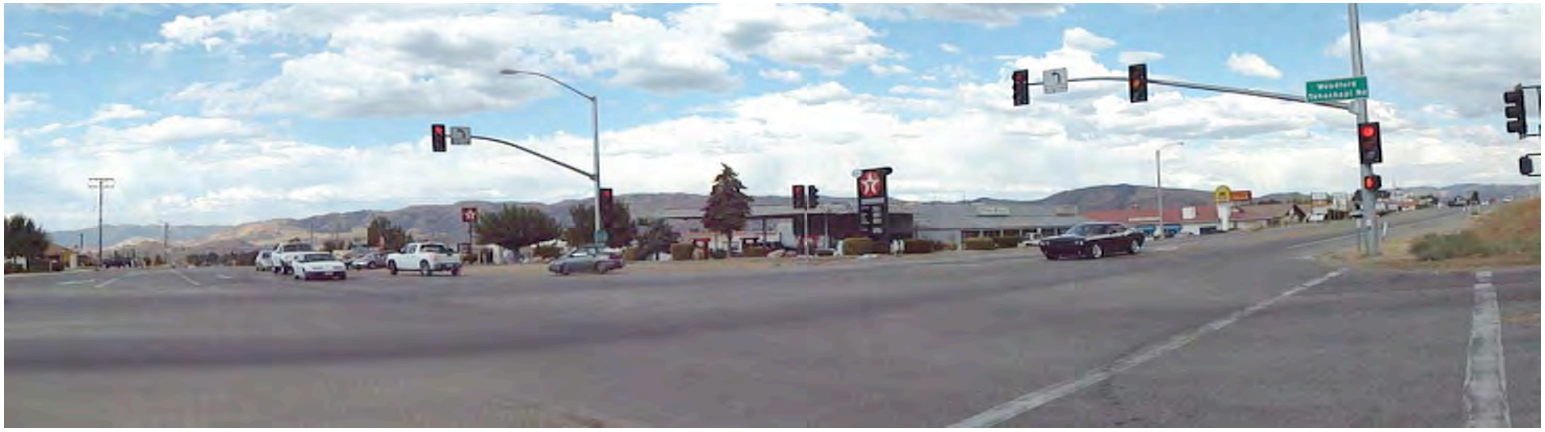


Photo A-12: View of existing north line near development (Route 2).

Photo A-13: View of existing north line near development (Route 2).

Photo A-14: View of existing Cummings Substation along Highline Road facing northeast.

Photo A-15: View of existing telecommunication and subtransmission lines and poles near residential structure along the Correction-Cummings-Kern River 1 66 kV Substransmission Line on Highline Road facing northeast (south line – Route 1).

4.1.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- Have a substantial adverse effect on a scenic vista?
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Substantially degrade the existing visual character or quality of the site and its surroundings?
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

4.1.4 Impact Analysis

The aesthetics impact analysis for this PEA was evaluated based upon a review of the Kern County General Plan (Kern County, 2009); Kern County Zoning Ordinance (Kern County, 2011); GTASCP (Kern County 2010); the Caltrans Scenic Highway Mapping System (Caltrans, 2011); information prepared by the Kern Council of Governments (Kern COG, 2004); site reconnaissance; visual simulations that were prepared for the Proposed Project (Truescape, 2012); site photography; aerial and satellite images; and other relevant sources.

The existing visual conditions and anticipated project-related effects (shown as visual simulations) are provided in this section of the PEA. The methodology for completing the visual analysis included the following tasks:

- A site reconnaissance was conducted with the CPUC, SCE, and the respective consultants in August 2011;
- Existing context photos were collected and the locations of key observation points (KOPs) and sensitive receptors were identified in consultation with CPUC's visual analyst;
- Six KOPs were selected for visual simulations to model the proposed Banducci Substation site; the visual analyst determined that these KOPs are highly sensitive or visible vantage points for potential sensitive receptors and warrant further review;
- Computerized visual simulation photographs/modeling of the Proposed Project, project features, and relevant project components were developed using 3D computerized modeling software; these photographs and visual simulations were

reviewed and compared to determine the potential impacts related to aesthetic resources that may result from the Proposed Project.

The six KOPs presented below are vantage points determined by SCE (using the method described above) to have the potential to be the most sensitive or disruptive to receptors.

KOP-1: Pelliser Road (north) – Following development, the proposed Banducci Substation and its associated components would be slightly visible in the foreground-middle ground zone[1] from this KOP and would not present a significant contrast to the existing conditions (see Figure 4.1-3: Visual Simulations).

KOP-2: Dale Road – The proposed Banducci Substation and its associated components would be visible in the foreground-middle ground zone from this KOP, more than from KOP 1 or KOP 4. However, the components would not present a significant contrast to the existing conditions (see Figure 4.1-3: Visual Simulations).

KOP-3: Pelliser Road (south) – The proposed Banducci Substation would be visible in the foreground-middle ground zone from this KOP, although the presence of these components would not present a significant contrast to the existing conditions (see Figure 4.1-3: Visual Simulations).

KOP-4: Highline Road – The proposed Banducci Substation and its associated components would be slightly visible in the foreground-middle ground zone from this KOP and would not present a significant contrast to the existing conditions (see Figure 4.1-3: Visual Simulations).

KOP-5: Pelliser Road (north) – The proposed Banducci Substation would be visible in the foreground-middle ground zone from this KOP and would present a contrast to the existing conditions (see Figure 4.1-3: Visual Simulations).

KOP-6: Unpaved Road (west of Bailey Road) – The proposed Banducci Substation and its associated components would be slightly visible in the foreground-middle ground zone from this KOP and would not present a significant contrast to the existing conditions (see Figure 4.1-3: Visual Simulations).

For this analysis, representative views from the six KOPs and several observation points in the vicinity of the Proposed Project site were photographed and evaluated to determine how the Proposed Project might alter the existing visual conditions. The following factors were considered in determining the extent and implications of the visual changes:

[1] According to the United States Department of Interior Bureau of Land Management (BLM), the foreground-middleground zone are views from areas that are less than 3-5 miles from the proposed activities BLM (2007).

- Specific changes in the landscape's visual composition, character, and any specially valued qualities
- The visual context (what surrounds the area)
- The extent to which the affected environment contains places or features that have been designated in government plans for visual protection or special consideration
- Particular consideration was given to effects on landscapes visible in the foreground (0- to 0.25-mile distance) from public viewpoints

Figure 4.1-3, Visual Simulations

View from: **Pelliser Road - North -** Existing Condition

View from: **Pelliser Road - North -** Proposed Condition

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL® Company

SCE Banducci Substation

KOP 1 - View from:
Pelliser Road - North

Existing and Proposed Condition

Viewpoint Location

Substation Location

Easting Position (SPCS-California Zone 5) :	**6381614.6**
Northing Position (SPCS-California Zone 5):	**2226286.9**
Elevation of Viewpoint Position (NAD83):	**3835(approx.)**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**16 February 2012 at 11:41 a.m.**
Orientation of View:	**S**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Photosimulation

PROVIDED BY

TRUESCAPE
CONSULTING & VISUAL FACILITATION

www.truescape.com

DATE PRODUCED: September 2012

View from: **Dale Road -** Existing Condition

View from: **Dale Road -** Proposed Condition

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

SCE Banducci Substation

KOP 2 - View from:
Dale Road

Existing and Proposed Condition

Viewpoint Location

Substation Location

Easting Position (SPCS-California Zone 5) :	**6380507**
Northing Position (SPCS-California Zone 5):	**2223887.6**
Elevation of Viewpoint Position (NAD83):	**3835(approx.)**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**12 September 2012 at 12:23 p.m.**
Orientation of View:	**E**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Photosimulation

PROVIDED BY

TRUESCAPE
CONSULTING & VISUAL FACILITATION

www.truescape.com

DATE PRODUCED: September 2012

View from: **Pelliser Road - South -** Existing Condition

View from: **Pelliser Road - South -** Proposed Condition

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL® Company

SCE Banducci Substation

KOP 3 - View from:
Pelliser Road - South

Existing and Proposed Condition

Viewpoint Location

Substation Location

Easting Position (SPCS-California Zone 5) : **6381548.1**
Northing Position (SPCS-California Zone 5): **2222358.5**
Elevation of Viewpoint Position (NAD83): **3841(approx.)**
Height of Camera Above Ground (ft): **5.4**
Date of Photography: **12 September 2012 at 12:12 p.m.**
Orientation of View: **N**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Photosimulation

PROVIDED BY

TRUESCAPE
CONSULTING & VISUAL FACILITATION

www.truescape.com

DATE PRODUCED: September 2012

View from: **Highline Road -** Existing Condition

View from: **Highline Road -** Proposed Condition

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL® Company

SCE Banducci Substation

KOP 4 - View from:
Highline Road

Existing and Proposed Condition

Viewpoint Location

Substation Location

Easting Position (SPCS-California Zone 5) :	**6383632**
Northing Position (SPCS-California Zone 5):	**2226558.1**
Elevation of Viewpoint Position (NAD83):	**3851(approx.)**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**16 February 2012 at 11:27 a.m.**
Orientation of View:	**SW**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Photosimulation

PROVIDED BY

TRUESCAPE
CONSULTING & VISUAL FACILITATION

www.truescape.com

DATE PRODUCED: September 2012

View from: **Pelliser Road North -** Existing Condition

View from: **Pelliser Road North -** Proposed Condition

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL® Company

SCE Banducci Substation

KOP 5 - View from:
Pelliser Road - North

Existing and Proposed Condition

Viewpoint Location

Substation Location

Easting Position (SPCS-California Zone 5) :	**6381596.6**
Northing Position (SPCS-California Zone 5):	**2224406.6**
Elevation of Viewpoint Position (NAD83):	**3834(approx.)**
Height of Camera Above Ground (ft):	**5.4**
Date of Photography:	**12 September 2012 at 12:54 p.m.**
Orientation of View:	**SSE**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Photosimulation

PROVIDED BY

TRUESCAPE
CONSULTING & VISUAL FACILITATION

www.truescape.com

DATE PRODUCED: September 2012

View from: **Southeast of Site -** Existing Condition

View from: **Southeast of Site -** Proposed Condition

SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

SCE Banducci Substation

KOP 6 - View from:
Southeast of Site

Existing and Proposed Condition

Viewpoint Location

Substation Location

Easting Position (SPCS-California Zone 5) : **6383495.2**
Northing Position (SPCS-California Zone 5): **2222571.1**
Elevation of Viewpoint Position (NAD83): **3871(approx.)**
Height of Camera Above Ground (ft): **5.4**
Date of Photography: **12 September 2012 at 1:11 p.m.**
Orientation of View: **NW**

NOTES:

Viewpoint locations have been obtained using handheld GPS coordinates

No part of this photosimulation shall be altered in any way.

Placement of Substation is based on preliminary, non-survey controlled camera alignment and therefore indicative only.

Photosimulation

PROVIDED BY

TRUESCAPE
CONSULTING & VISUAL FACILITATION

www.truescape.com

DATE PRODUCED: September 2012

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

Construction Impacts

No Impact. The Proposed Project would be located in a relatively flat agricultural area. This area does not contain any unique scenic qualities or characteristics designated as scenic vistas. The Proposed Project would be located approximately 7 miles away from the closest scenic vista and would not be visible from such vistas because the distance and the steep landscape surrounding the Proposed Project region provide a natural barrier between the Proposed Project site and the vistas. The scenic vistas would not be visible from the Proposed Project site and, as such, the visual attributes of these sites would not be compromised by construction or development of the Proposed Project. Therefore, the construction of the Proposed Project would not be expected to have a substantial adverse effect on a scenic vista.

Operation Impacts

No Impact. Operation of the Proposed Project would not be anticipated to result in impacts associated with scenic vistas. As previously noted, the Proposed Project would not be visible from the relevant scenic vistas in the region due to the distance and the landscape in the area. Operation of the Proposed Project would not be visible from the designated scenic vistas and, as such, would not impact or compromise the aesthetic quality or visitor's experience at the scenic vista locations. Therefore, the operation of the Proposed Project would not be expected to have a substantial adverse effect on a scenic vista.

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

Construction Impacts

No Impact. Construction of the Proposed Project would not be visible from the scenic resources in the region and as such would not compromise these resources. The construction-related activities associated with the Proposed Project would not occur near any established scenic resource. The major construction activities for the Proposed Project Study Area would occur at least 7 miles away from the nearest scenic resource and approximately 13 miles away from the portions of SR 14 and SR 58 that are eligible for State Scenic Highway designation. In addition, there are no State Scenic Highways located in Kern County and construction of the Proposed Project would not be located within the viewshed of a scenic resource or State Scenic Highway. Construction of the Proposed Project would not require the alteration or removal, or cause any damage to, any scenic resource, as it would not be located near or within the viewshed of a scenic resource. Therefore, construction of the Proposed Project would not be expected to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.

Operation Impacts

No Impact. As previously noted, the Proposed Project would not be located within the viewshed of a scenic resource, including resources within a scenic highway. Operation of the Proposed Project would not occur near or be visible from any established scenic resource or designated scenic highway. As with construction, operation of the Proposed Project would not require the alteration of, removal of, or cause any damage to, any scenic resource, as it would not be located near or within the viewshed of a scenic resource. Therefore, operation of the Proposed Project would not be expected to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway.

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

The Proposed Project would be located in a largely rural area containing agricultural uses and farmland. Existing structures and development within the area surrounding the Proposed Project are mixed and include electrical utility transmission poles; the California Correctional Institution; commercial and agricultural structures, such as barns and offices; and scattered residences. The nearest residence is located approximately 0.25 mile south of the proposed Banducci Substation site.

Construction Impacts

Less Than Significant Impact. During construction, the temporary presence of SCE crews, equipment, and activity, including any staging and the generation of waste, would be expected to temporarily interrupt the existing visual character of the area. Construction activities would be visible from the surface streets surrounding the Proposed Project Study Area and would temporarily alter the public viewsheds from local roads. It is anticipated that the Proposed Project's more substantial construction activities would occur off the main roads and on the proposed Banducci Substation site. Construction of the Proposed Project, consisting of the proposed Banducci Substation, telecommunications facilities, and subtransmission components, would be temporary and would not be expected to significantly interfere with the existing visual character or quality of the site or its surroundings.

The Proposed Project Study Area has been determined to have a low level of scenic quality and moderate to low sensitivity level based upon the scenic quality evaluation and the sensitivity level analysis that was completed for the Proposed Project Study Area and KOPs. As shown in Figure 4.1-2: Existing Context Photos, telecommunications facilities already exist along the proposed telecommunications routes. As such, the Proposed Project's upgrades and additions along these routes would be consistent with the existing telecommunications structures in the area. While not significant, the most notable visual shift associated with the Proposed Project would be the view of the proposed Banducci Substation site from Pelliser Road. As such, the potential changes to the visual characteristic of the Proposed Project Study Area would be incremental but not significant, as the area is currently interrupted by the presence of a variety of diverse land uses and activities in the area, including, but not limited to, agricultural, commercial, and institutional uses.

The creation of a new driveway or access points to the proposed Banducci Substation site, general staging activities, and construction-related waste during construction activities may impact potential sensitive receptors, including the occupants of the nearest residence, farmhands, or other field laborers or individuals located near or passing by the construction area. To minimize any such impacts, SCE would incorporate standard practices such as maintaining a clean construction site and ensuring that construction-related waste is obscured from the public to reduce the potential unsightly aspects associated with construction activities. With incorporation of these practices, impacts associated with the potential for the Proposed Project to substantially degrade the existing visual character or quality of the site and its surroundings would be less than significant.

Operation Impacts

Less Than Significant Impact. The Proposed Project components would include the development of new structures, walls, and poles that do not currently exist at the proposed Banducci Substation site. However, these elements would be designed in a manner that is consistent with the existing visual character of the site and its surroundings. Specifically, the colors, height, and finishes of the structures and elements within the proposed Banducci Substation would be designed to reduce the potential contrasts with the existing area (see Figure 4.1-3: Visual Simulations). As noted above, the existing proposed Banducci Substation site and the surrounding area are used for agricultural, commercial, and institutional purposes. Although the landscaping and design features of the proposed Banducci Substation would vary from the existing site, these changes would be incremental, but not significant, and would largely be consistent with the surrounding settings. The Proposed Project's telecommunications facilities would be located in areas that contain existing poles, structures used for commercial purposes, existing SCE rights-of-way (ROWs), and easements. As previously noted, the Proposed Project Study Area has been determined to have a low level of scenic quality and moderate to low sensitivity level based upon the scenic quality evaluation and the sensitivity level analysis that was completed for the Proposed Project Study Area and KOPs. The Proposed Project would represent an incremental, but not significant, change from the existing site and its surroundings and would not substantially alter the existing visual characteristic of the Proposed Project Study Area or the KOPs.

The Proposed Project subtransmission line elements, including the new poles and pole replacements, would be consistent with the existing uses. The new tubular steel poles (TSPs) and light-weight steel (LWS) poles would be placed within existing and new SCE easements and would be consistent with the look of the existing poles in the area. Pole replacement activities would consist of the removal of existing wood poles and replacement with LWS poles and TSPs; however, these poles would be a dull grey color to reduce any contrast with the existing surroundings so that the poles would not adversely alter the visual character of the area. The proposed Banducci Substation would be painted in light and neutral colors, and landscaping would be used to filter views of the site from the neighboring residences, motorists or individuals near or passing by the site, and the surrounding community. Figure 4.1-3: Visual Simulations provides site renderings depicting simulations of the existing and relevant features of the Proposed Project from the six identified KOPs. As depicted in Figure 4.1-3: Visual Simulations, changes in the existing views of the proposed Banducci Substation site would be incremental,

but not significant, and would not be significant when observed from the KOPs. The Proposed Project would not be expected to substantially degrade the existing visual character or quality of the site and its surroundings.

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

Construction Impacts

Less Than Significant Impact. Daytime construction of the Proposed Project would not create new sources of substantial light or glare. In the event that construction activities were to occur during evening hours, lighting would be used to protect the safety of the construction workers. These lights would be oriented and shielded to minimize their effect on the nearest roadway and potential receptors. Shades may also be used and incorporated into the construction activities as necessary to ensure that lighting and glare would not disrupt the existing nighttime view or "dark skies." In the event of such nighttime construction activities (for example, if existing lines must be taken out of service for the work to be performed safely and the line outage must be taken at night for system reliability reasons), SCE would obtain variances as necessary from appropriate jurisdictions where the work would take place. Thus, any impacts associated with the potential for construction of the Proposed Project to create a new source of substantial light or glare that would adversely affect day or nighttime views in the area would be less than significant.

Operation Impacts

Less than Significant Impact. The proposed Banducci Substation site would require that lighting be available for use in the evenings for safety and for scheduled or emergency maintenance activities at the site. The lights used would be controlled by a manual switch and would normally be in the "off" position. Additionally, these lights would be directed downward to reduce glare and prevent it from spilling outside of the site or from disturbing the "dark skies" in the area.

During the daytime, some of the structures at the proposed Banducci Substation could be potential sources of glare to individuals near or passing by the proposed Banducci Substation site. However, the Proposed Project's design includes the use of dull or neutral materials for the structures to eliminate or reduce light or glare associated with the Proposed Project to a less than significant level. Therefore, the potential for operation of the Proposed Project to create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area would be less than significant.

4.1.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for aesthetic resources.

4.1.6 Alternative

Site Alternative B

Site Alternative B would be located approximately 0.5 mile north of the proposed Banducci Substation location and would be situated within the same environmental setting as the proposed Banducci Substation site location. Site Alternative B would also have the same proposed telecommunications routes as the Proposed Project. Due to the fact that Site Alternative B is located within the same environmental setting area as the Proposed Project, impacts related to Site Alternative B would be comparable to those anticipated for the Proposed Project.

Alternative B would be comparable to the Proposed Project's components, size, layout, location and the surrounding community. The nearest sensitive receptor to Site Alternative B would be located approximately 200 feet to the southwest. Although there is currently a structure at the Site Alternative B location, development of a substation would be expected to shift the use, and visual setting of the site as seen by this receptor. It would be anticipated that the design elements such as the use of dull and neutral finishes on the structures, landscaping, as well as other design features would minimize potential impacts to aesthetic resources. As with the Proposed Project, Site Alternative B would be located approximately 25 miles west and northwest of the "Eligible" portions of SR 14 and SR 58, respectively. Although impacts to aesthetic resources would be expected to be less than significant for this alternative, the potential impacts associated with Site Alternative B would be expected to be slightly more considerable than those of the Proposed Project due to the closer proximity of Site Alternative B to the nearest receptor.

4.1.7 References

California Department of Transportation (Caltrans). (2011). *Scenic Highway Mapping System*. Retrieved from http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kern County. (2011). *Kern County Zoning Ordinance*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved from http://www.co.kern.ca.us/planning/pdfs/KCZODec11.pdf

Kern County Council of Governments (Kern COG). (2004). *Kern Master Environmental Assessment Resource - Historic Sites.* Bakersfield, CA.

Truescape Visual Communication. (2012). *Visual Simulations*. Portland, OR.

U.S. Department of Interior - Bureau of Land Management (BLM). 2007 (last modified). *BLM Handbook H-8410-1,Visual Resource Inventory*. Available at: http://www.blm.gov/nstc/VRM/vrmsys.html

4.2 Agriculture and Forestry Resources

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to agriculture and forestry resources associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts related to agriculture and forestry resources.

This analysis describes the existing and proposed conditions of the agricultural and forestry resources in the Proposed Project Study Area, which consists of the Substation Study Area and the area along the proposed telecommunications routes; evaluates the characteristics of agriculture and forests in the Study Area; and assesses the potential impacts that may occur as a result of the Proposed Project.

4.2.1 Environmental Setting

Agriculture has historically played an important role in Kern County's economy and continues to be a vital industry. In 2010, the gross value of all agricultural commodities within Kern County was $4,757,260,700, an increase of $1,141,687,700 over the previous year's total (Kern County Department of Agriculture and Measurement Standards, 2010). According to the 2010 Kern County Crop Report, this increase can primarily be attributed to increases in acreage and production in fruit, nut, and vegetable crops (Kern County Department of Agriculture and Measurement Standards, 2010).

The proposed Banducci Substation site is located in the unincorporated Cummings Valley area of Kern County. The proposed telecommunications facilities would be largely located east of Cummings Valley in the City of Tehachapi.

Much of Cummings Valley, including the majority of land surrounding the Proposed Project Study Area, is currently used for agricultural purposes. The proposed Banducci Substation site has varied from undeveloped use to agricultural use.

Agricultural Land Classification

CEQA Section 21060.1 defines agricultural land as "Prime Farmland," "Farmland of Statewide Importance," or "Unique Farmland," as defined by the United States Department of Agriculture land inventory and monitoring criteria and modified for the State of California. The California Department of Conservation (CDC) provides services and information that promote environmental health, economic vitality, informed land-use decisions and sound management of California's natural resources. The CDC administers or supports a number of programs designed to promote orderly growth in coordination with agricultural endeavors. One of these programs, the Farmland Mapping and Monitoring Program (FMMP), produces Important Farmland Maps,

which are a hybrid of resource quality (i.e. soils) and land use information. According to the CDC, in order to qualify as Prime Farmland or Farmland of Statewide Importance, a site must have been used for irrigated agricultural production at some time during the four years prior to the mapping date. The categories composing the farmland classification in Kern County are summarized in Table 4.2-1: State-Designated Farmland Acreage.

Table 4.2-1: State-Designated Farmland Acreage

Category	Kern County (Total Acreage Inventoried)[1]
Prime Farmland	626,217
Farmland of Statewide Importance	216,348
Unique Farmland	96,656
Important Farmland Total	**939,221**
Grazing Land	1,807,069
Agricultural Land Total	**2,746,290**

NOTE: [1] All Measurements represent acres of farmland.
SOURCE: CDC, 2008

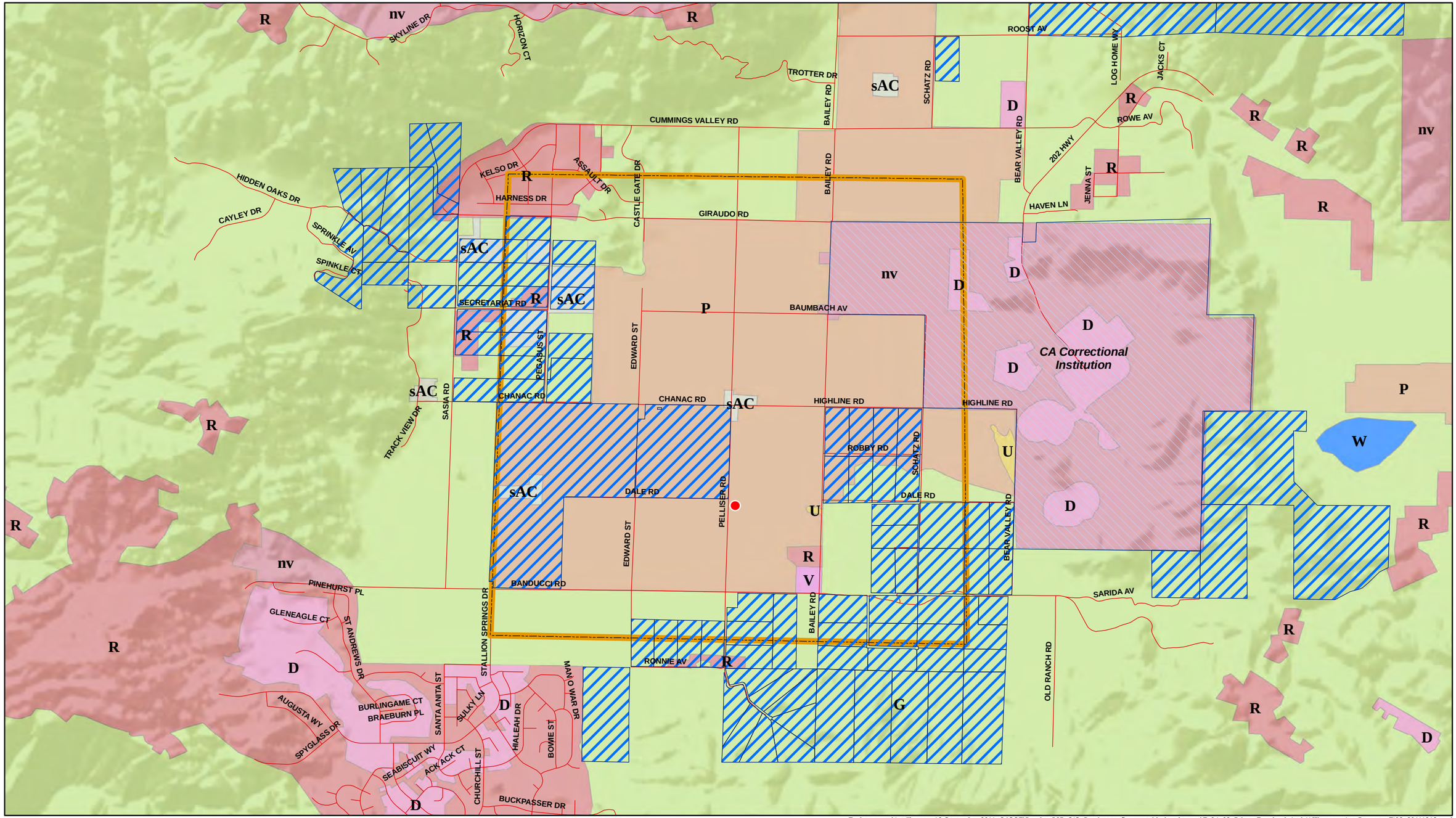
The CDC established the FMMP in 1982 to assess the location, quantity, and quality of agricultural lands and the conversion of these lands to other uses. The FMMP was utilized to determine state-designated farmlands in the Proposed Project area, as shown in Figure 4.2-1: Prime Farmland and Williamson Act Properties. The proposed Banducci Substation site is located on a parcel that is designated as Prime Farmland; however as it was previously mentioned in this section, the land appears to have had varied uses.

The CDC also oversees land protected by the Williamson Act. The Williamson Act (also known as the California Land Conservation Act of 1965) enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. The specified land is then restricted to agricultural and compatible uses through a rolling-term, 10-year contract between the private land owner and the local government (CDC, 2007). There are several Williamson Act parcels located near the proposed Banducci Substation site as shown in Figure 4.2-1: Prime Farmland and Williamson Act Properties. The proposed Banducci Substation site, however, is not located within a Williamson Act parcel.

Currently, the General Plan land use designation for the proposed Banducci Substation site is designated as Intensive Agriculture and the areas where the proposed telecommunications routes would be located are largely designated as Residential, Incorporated Cities, Resource Agriculture, and Intensive Agriculture. Both the General Plan and Zoning Ordinance allow for the development of a utility substation within these land use designations (Kern County, 2009).

Forest Land Classification

Forest land is defined by the California Public Resources Code Section 12220(g) as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for the management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Timberland is defined by the California Timberland Productivity Act as "Privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre." There is currently no forest land or timberland located within or near the Proposed Project Study Area.



Environmental Intelligence. 13 September 2011. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_02_Prime_Farmland_And_Williamson_Act_Property_EI02_20111212.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- (D) Urban and Built-Up Land
- (G) Grazing Land
- (P) Prime Farmland
- (R) Rural Residential Land
- (U) Unique Farmland
- (V) Vacant or Disturbed Land
- (W) Water
- (nv) Nonagricultural and Natural Vegetation
- (sAC) Semi-Agricultural and Rural Commercial Land
- Williamson Act Properties

N W E S

0 0.5 1 Miles

Figure 4.2: Prime Farmland And Williamson Act Properties

Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

4.2.2 Regulatory Setting

The regulatory framework that is discussed in this section identifies the federal, State, regional, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to agriculture and forest resources.

4.2.2.1 Federal

U.S. Department of Agriculture Farmland Classification

The U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) has established classifications for notable agricultural lands based on criteria for soil characteristics, climatic conditions, and water supply. Notable agricultural lands are classified as follows:

- Prime Farmland: land that has the best combination of physical and chemical properties for the production of crops
- Farmland of Statewide Importance: similar to Prime Farmland, but with minor shortcomings (e.g., steeper slopes, inability to hold water)
- Unique Farmland: land of lesser quality soils, but recently used for the production of specific high economic value crops

Collectively, these valuable agricultural lands are referred to as "Farmland." The Proposed Project components would be located adjacent to land that has been designated as Prime Farmland and Unique Farmland, so the federal classifications were reviewed for this analysis.

4.2.2.2 State

Farmland Mapping and Monitoring Program

Every even-numbered year, the CDC issues a Farmland Conversion Report as a part of the FMMP. The FMMP identifies and designates lands that are Prime Farmland or Farmland of Statewide Importance. FMMP data are used in elements of some county and city general plans and associated environmental documents as a way of assessing project impacts on Prime Farmland and, in regional studies, for assessing impacts due to agricultural land conversion. As previously noted, the Proposed Project would be located adjacent to farmland, so the FMMP designations were reviewed in support of this analysis.

The Williamson Act

The California Legislature passed the Williamson Act in 1965 to preserve agricultural and open-space lands by discouraging premature and unnecessary conversion to urban uses. The CDC oversees agricultural lands protected by the Williamson Act. According to the law, a landowner may enter into a contract, agreeing to protect the land's open space or agricultural uses in exchange for reduced property taxes. Nearly 16.9 million of the state's 45 million acres of farm and ranch land are currently protected under the Williamson Act (CDC, 2007). The vehicle for these agreements is a rolling-term, 10-year contract (i.e., unless either party files a "notice of nonrenewal," the contract is automatically renewed annually for an additional year; CDC, 2007). No Williamson Act parcels are crossed by the Proposed Project; however, Williamson Act properties are located near the proposed Banducci Substation site.

4.2.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County recognizes the importance of agricultural resources and has offered goals to protect the economic strength derived from the petroleum, agriculture, rangeland, and mineral resources that are important to the County in the Kern County General Plan (Kern County, 2009). The County encourages new development to be large enough to meet generous projections of foreseeable need, but in locations that do not impair those resources.

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

4.2.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland as defined by Public Resources Code 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)?
- Result in the loss of forest land or conversion of forest land to non-forest use?
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

4.2.4 Impact Analysis

The impacts to agricultural and forest resources for this PEA were evaluated based upon a review of the Kern County General Plan (Kern County, 2009); GTASCP (Kern County, 2010); CDC FMMP, farmland mapping, and Williamson Act Contracts; and site reconnaissance.

The methodology for evaluating impacts to agricultural resources included the following tasks:

- Utilizing geographical information systems (GIS) data from the CDC to determine where project elements were located in relation to Farmland and Williamson Act Contract lands
- Utilizing GIS data from Kern County to determine the zoning of the Proposed Project site
- Determining if the components of the Proposed Project would be permitted within the zoning designation
- Conducting site reconnaissance to determine the current use of the Proposed Project site and the surrounding areas

The evaluation of the Proposed Project related to impacts to agriculture and forest resources is analyzed in the body of this section.

Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Construction Impacts

Less than Significant Impact. The proposed Banducci Substation site would be located on land that is designated as Prime Farmland in the FMMP. This land is not designated as Unique Farmland or Farmland of Statewide Importance. Construction of the proposed Banducci Substation would impact a total of 6.3 acres of designated agriculture in the FMMP. As this land conversion is relatively minor (0.001 percent) of the over 626,217 acres of lands designated as Prime Farmland in Kern County, impacts related to Prime Farmland would be considered adverse but less than significant. Construction of the Proposed Project would require the establishment of temporary staging yards. The temporary use of these sites as staging yards would not convert prime farmland, unique, or farmland or conflict with the existing uses at these sites.

The proposed telecommunications routes would be located on existing Southern California Edison (SCE) easements and would not change the use of the land. The proposed telecommunications routes would largely be located on land designated by the FMMP as Urban and Built-Up Land or Grazing Land (CDC, 2008). While portions of the proposed telecommunications routes would be located on land designated by the FMMP as Prime Farmland, the telecommunication cables would be compatible with agricultural uses of the land as noted earlier in this section (Kern County, 2009). Therefore, installation of the telecommunications facilities would not convert land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use. The Proposed Project would not involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland, to nonagricultural use. Construction activities for the proposed Banducci Substation site would result in the conversion of a relatively minor amount of Prime Farmland; however, they would not result in conversion of any Unique Farmland or Farmland of Statewide Importance to nonagricultural use. Therefore, considering the substantial amount of farmland in the area surrounding the Proposed Project, construction impacts associated with the conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance would be less than significant.

Operation Impacts

Less Than Significant Impact. As previously noted, the proposed Banducci Substation site would be located on land designated as Prime Farmland, although not on any land designated as Unique Farmland or Farmland of Statewide Importance. Operation of the proposed Banducci Substation would utilize the permanently disturbed 6.3 acres impacted during construction. As this land conversion is relatively minor (0.001 percent) of the over 626,217 acres of lands designated as Prime Farmland in Kern County, impacts related to Prime Farmland would be considered adverse but less than significant.

The proposed telecommunications routes would be compatible with agricultural uses of the land (Kern County, 2009). The Proposed Project would not involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to nonagricultural use. Operation of the Proposed Project would result in the conversion of a relatively minor amount of Prime Farmland. However, it would not result in conversion of any Unique Farmland or Farmland of Statewide Importance to nonagricultural use. Therefore, considering the substantial amount of farmland in the area surrounding the Proposed Project, operational impacts associated with the conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance would be less than significant.

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

Construction Impacts

No Impact. The proposed Banducci Substation would be located on land zoned as Exclusive Agriculture (Kern County, 2009). The Exclusive Agriculture zoning district permits the use of utility substations, transmission lines and supporting poles, and underground facilities for gas, water, electricity, telephone, or telegraph service owned and operated by a public utility company or other company under the jurisdiction of the CPUC (Kern County, 2009). Portions of the proposed telecommunications routes would be on land zoned as Exclusive Agriculture and Williamson Act contract lands; however, the telecommunications facilities would not convert the existing land use to a nonagricultural use and would be compatible with agricultural uses of the land (Kern County, 2009). Therefore, construction of the proposed Banducci Substation would not conflict with the existing zoning designation.

Section 51238 of the Williamson Act indicates that, unless local organizations declare otherwise, the erection, construction, alteration, or maintenance of gas, electric, water, or communications facilities are compatible with Williamson Act contracts. Nonetheless, SCE has considered what effects, if any, the Proposed Project would have on lands protected by the Williamson Act.

The majority of the Proposed Project would not be located on land subject to Williamson Act contracts and any components of the telecommunications facilities that pass through such lands would not convert or alter the land use. Therefore, construction activities for all components of the Proposed Project would not cause potential conflicts with land zoned for agricultural use or land subject to Williamson Act contracts.

Operation Impacts

No Impact. Operation of the Proposed Project would be permitted within the agricultural zoning designations noted above; therefore, operation of the Proposed Project would not conflict with the zoning designation. The proposed Banducci Substation would not be located on land subject to Williamson Act contracts. Therefore, operation of the proposed Banducci Substation would not cause potential conflicts with land subject to Williamson Act contracts. Portions of the

proposed telecommunications routes may be located on Williamson Act contract lands; however, telecommunications cables, such as those that are included as components of the Proposed Project, are considered a compatible use for lands subject to Williamson Act contracts (Kern County, 2009). Therefore operation of the Proposed Project would not result in impacts related to conflicts with existing zoning for agricultural use or a Williamson Act contract.

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

Construction Impacts

No Impact. The proposed Banducci Substation site would be located in a predominately rural area and would not be located on or near lands zoned as forest land, timberland, or designated Timberland Production lands. The proposed telecommunications routes would be in rural areas within the City of Tehachapi. These routes would not be located on or near land zoned as forest land, timberland, or timberland zoned Timberland Production. Therefore, construction activities for all components of the Proposed Project would not conflict with existing zoning or cause rezoning of forest land, timberland, or timberland zoned Timberland Production.

Operation Impacts

No Impact. As with construction, operation of the proposed Banducci Substation site would be located in a predominately rural area and would not be located on or near lands zoned as forest land, timberland, or designated Timberland Production lands. The proposed telecommunications routes would be in rural areas within the City of Tehachapi. These routes would not be located on or near land zoned as forest land, timberland, or timberland zoned Timberland Production. Therefore, operation of the Proposed Project would not conflict with existing zoning or cause rezoning of forest land, timberland, or timberland zoned Timberland Production.

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

Construction Impacts

No Impact. As previously noted, the Proposed Project would not have the potential to impact forest land, including converting existing forest lands. Therefore, construction activities for all components of the Proposed Project would not result in the loss of forest land or conversion of forest land to nonforest use.

Operation Impacts

No Impact. As previously noted, the Proposed Project would not have the potential to impact forest land, including converting existing forest lands. Therefore, operation of the Proposed Project would not result in the loss of forest land or conversion of forest land to nonforest use.

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

Construction Impacts

No Impact. The Proposed Project would not involve any changes to the existing environment that would impact surrounding agricultural or forest land. Construction of the Proposed Project would not require the conversion of existing agricultural or forest land. The Proposed Project would not induce growth; therefore, construction of the Proposed Project would not be expected to result in changes to the environment that would result in the conversion of either Farmland to nonagricultural uses or forest land to nonforest use. Therefore, construction activities for all components of the Proposed Project would not result in the loss of forest land or conversion of forest land to nonforest use.

Operation Impacts

No Impact. The Proposed Project would not involve any changes to the existing environment that would affect surrounding agricultural or forest land. As noted, the Proposed Project would not induce growth; therefore, operation of the Proposed Project would not be expected to result in changes to the environment that would result in the conversion of either Farmland to nonagricultural uses or forest land to nonforest use. Therefore, operation of the Proposed Project would not result in the loss of forest land or conversion of forest land to nonforest use.

4.2.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for agriculture and forestry resources.

4.2.6 Alternative

Site Alternative B

Site Alternative B would be located on land designated as Semi-Agricultural and Rural Commercial Land that is used partially as a sod farm and includes a structure used as a commercial office for the farming operation. While this office would no longer be used for the farming operation if Site Alternative B were developed, this would not be considered a significant impact as the land is not designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, and because the Proposed Project would be compatible with the agricultural uses of the surrounding land.

The General Plan land use classification of Site Alternative B is Residential, Minimum 20 Gross Acres/Unit and the zoning designation is Exclusive Agriculture (Kern County, 2009). Both the Kern County General Plan and Zoning Ordinance allow for the development of a utility substation within these land use classifications (Kern County, 2009). The proposed telecommunications routes would be the same as for the Proposed Project except that they would

not include a brief portion of cable that would continue south along Pelliser Road to the proposed Banducci Substation site. As with the Proposed Project, Site Alternative B would be compatible with Williamson Act lands and would not affect forest lands.

4.2.7 References

California Department of Conservation. (2007). *Division of Land Resource Protection, Williamson Act Program.* Online. Retrieved August 2011 from http://www.consrv.ca.gov/DLRP

California Department of Conservation. (2008). Table A-10, Kern County Land Use Conversion Table. *2006-2008 California Farmland Conversion Report*. Retrieved August 2011 from http://www.conservation.ca.gov/dlrp/fmmp/pubs/2006-2008/Pages/FMMP_2006-2008_FCR.aspx

California Department of Conservation. (2010). *Farmland Mapping and Monitoring Program - Important Farmland Map Categories.* Retrieved August 2011 from http://www.conservation.ca.gov/dlrp/fmmp/mccu/Pages/map_categories.aspx

Google Earth. *Historical imagery (Kern County–Substation Study Area).* Retrieved January 26, 2012.

Kern County. (2010). *Greater Tehachapi Area specific and community plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County general plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kern County Department of Agriculture and Measurement Standards. (2010). *2010 Kern County Agricultural Crop Report.* Retrieved September 2011 from http://www.kernag.com/caap/crop-reports/crop10_19/crop2010.pdf

4.3 Air Quality

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential air quality related impacts associated with the construction and operation of Southern California Edison's (SCE's) proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of air quality in the Proposed Project Study Area, evaluates the air quality characteristics, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.3.1 Environmental Setting

The Proposed Project is located within the Mojave Desert Air Basin in the Eastern Kern Air Pollution Control District (EKAPCD). The EKAPCD consists of the eastern portion of Kern County. The EKAPCD has the primary responsibility for regulating stationary sources of air pollution situated within its jurisdictional boundaries. The EKAPCD implements air quality programs required by State and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their role in protecting air quality.

The Mojave Desert Air Basin is composed of four air districts: the EKAPCD, the Antelope Valley Air Quality Management District (AVAQMD), the Mojave Desert Air Quality Management District (MDAQMD), and the South Coast Air Quality Management District (SCAQMD). The EKAPCD consists of the eastern portion of Kern County, the AVAQMD consists of the northeastern portion of Los Angeles County, the MDAQMD includes San Bernardino County and the easternmost portion of Riverside County, and the SCAQMD includes the eastern portion of Riverside County (TAHA, 2012).

The Mojave Desert Air Basin covers more than 20,000 square miles and encompasses the majority of California's high desert areas. It is bounded by the San Gabriel and San Bernardino Mountains to the south. These mountains serve as a boundary separating the Mojave Desert Air Basin and the South Coast Air Basin. The Tehachapi Mountains serve as the northwest boundary separating the Mojave Desert Air Basin from the San Joaquin Air Basin. Most of the Mojave Desert Air Basin is sparsely populated and, as a result, has less industrial growth and fewer automobiles to generate pollution than in other areas in California (TAHA, 2012). During high wind conditions, air quality in the Mojave Desert Air Basin is also heavily influenced by airborne pollutants transported into the region from the San Joaquin Valley and South Coast Air Basins (TAHA, 2012). Table 4.3-1: 2008–2010 Ambient Air Quality Data in Proposed Project Vicinity, Table 4.3-2: National and State Ambient Air Quality Standards and Attainment Status for the Eastern Kern Air Pollution Control District, Table 4.3-3: Mojave Desert Air Basin Estimated Annual Average Emissions (Tons/Day), and Table 4.3-4: Kern County–Mojave Desert

Air Basin Estimated Annual Average Emissions (Tons/Day) provide an overview of the existing ambient air quality in the vicinity of the Proposed Project site.

The mountains and hills within the Mojave Desert Air Basin contribute to the variation of rainfall, temperature, and winds throughout the region. Within the Proposed Project Study Area and vicinity, the average wind speed, as recorded at the Oak Knolls Monitoring Station, is approximately 5.8 miles per hour (TAHA, 2012). Wind in the vicinity of the Proposed Project Study Area predominately blows from the southwest.

Most of the Mojave Desert Air Basin is sparsely populated which has led to a limited generation of man-made pollutants from vehicle traffic and other activities. However, significant quantities of natural fugitive dust emissions (generating from unpaved roads, cleared agricultural land, or other exposed open areas with sparse vegetation) can become airborne under high wind conditions.

The annual average temperature in the Proposed Project Study Area is 68 degrees Fahrenheit (°F) (TAHA, 2012). The Proposed Project Study Area experiences an average winter temperature of approximately 53°F and an average summer temperature of approximately 84°F (TAHA, 2012). Average annual rainfall within the Cummings Valley, where the proposed Banducci Substation component of the Proposed Project would be located, is between 10 and 14 inches (DWR, 2004). Total precipitation in the Proposed Project Study Area averages approximately 11 inches annually (TAHA, 2012). Precipitation occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages approximately 5 inches during the winter, approximately 3 inches during the spring, approximately 2 inches during the fall, and less than 1 inch during the summer (TAHA, 2012).

Table 4.3-1: 2008–2010 Ambient Air Quality Data in Proposed Project Vicinity

Pollutant	Pollutant Concentration & Standards	Mojave–923 Poole Street, Bakersfield–Golden State Highway, and Arvin-Bear Mountain Monitoring Stations		
		Number of Days Above State Standard		
		2008	2009	2010
Ozone	Maximum 1-hr Concentration (ppm)	0.112	0.101	0.092
	Days > 0.09 ppm (State 1-hr standard)	15	3	0
	Days > 0.12 ppm (Federal 1-hr standard)	0	0	0
	Maximum 8-hr Concentration (ppm)	0.103	0.084	0.084
	Days > 0.07 ppm (State 8-hr standard)	60	61	21
	Days > 0.075 ppm (Federal 8-hr standard)	41	32	3
Carbon Monoxide	Maximum 1-hr Concentration (ppm)	N/A	N/A	N/A
	Days > 20 ppm (State1-hr standard)	N/A	N/A	N/A
	Maximum 8-hr Concentration (ppm)	2.17	1.51	1.46
	Days > 9.0 ppm (State 8-hr standard)	0	0	0
Nitrogen Dioxide	Maximum 1-hr Concentration (ppm)	0.033	0.051	0.032
	Days > 0.18 ppm (State 1-hr standard)	0	0	0
PM_{10}	Maximum 24-hr Concentration ($\mu g/m^3$)	144.8	67	49
	Days > 50 $\mu g/m^3$ (State 24-hr standard)	2	1	0
$PM_{2.5}$	Maximum 24-hr Concentration ($\mu g/m^3$)	19.1	12.7	10.0
	Days > 35 $\mu g/m^3$ (National 24-hr standard)	0	0	0
	Annual Arithmetic Mean ($\mu g/m^3$)	n/a	5	5
	Exceed State Standard (12 $\mu g/m^3$)	n/a	No	No
	Exceed Federal Standard (15 $\mu g/m^3$)	n/a	No	No

NOTE: Data provided by California Air Resources Board (CARB) Air Quality Data Statistics. Mojave – 923 Poole Street air monitoring station data was used for O_3, PM_{10}, and $PM_{2.5}$; Bakersfield-Golden State Highway air monitoring data was used for CO; and Arvin-Bear Mountain Boulevard air monitoring station was used for NO_2. Retrieved September 13, 2011, from http://www.arb.ca.gov/adam/index.html

SOURCE: TAHA, 2012. Also see: CARB, Top 4 Summary, Retrieved September 13, 2011, from http://www.arb.ca.gov/adam/topfour/topfour1.php

Table 4.3-2: National and State Ambient Air Quality Standards and Attainment Status for the Eastern Kern Air Pollution Control District

Pollutant	Averaging Period	California		Federal	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	Nonattainment	—	—
	8-hour	0.070 ppm (137 µg/m^3)	Nonattainment	0.075 ppm (147 µg/m^3)	Nonattainment
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	Nonattainment	150 µg/m^3	Nonattainment
	Annual Arithmetic Mean	20 µg/m^3	Nonattainment	—	—
Fine Particulate Matter ($PM_{2.5}$)	24-hour	—	—	35 µg/m^3	Unclassified
	Annual Arithmetic Mean	12 µg/m^3	Attainment	15.0 µg/m^3	Attainment
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Unclassified
	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Unclassified
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Attainment	53 ppb (100 µg/m^3)	Unclassified
	1-hour	0.18 ppm (338 µg/m^3)	Attainment	100 ppb (188 µg/m^3)	—
Sulfur Dioxide (SO_2)	24-hour	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Unclassified
	1-hour	0.25 ppm (655 µg/m^3)	Attainment	75 ppb (196 µg/m^3)	Unclassified
Lead (Pb)	30-day average	1.5 µg/m^3	Attainment	—	—
	Calendar Quarter	—	—	0.15 µg/m^3	—

NOTE: "—" = Information not available

SOURCE: TAHA, 2012. Also see: California Air Resources Board, *Ambient Air Quality Standards*, and *Area Designations Maps/State and National* (2011) and United States Environmental Protection Agency, *The Green Book Nonattainment Areas for Criteria Pollutants* (2011).

Table 4.3-3: Mojave Desert Air Basin Estimated Annual Average Emissions (Tons/Day)

Sources	TOG	ROG	CO	NO_X	SO_X	PM	PM_{10}	$PM_{2.5}$
Stationary Sources	63.8	16	27.7	78.8	7.6	84.2	46.2	22
Areawide Sources	35.1	15.8	25.6	2.2	0.1	270.2	141.5	21.3
Mobile Sources	67.4	61.1	378.3	191.5	1.2	12.1	11.9	10.5
Total for Mojave Desert Air Basin	**166.3**	**92.9**	**431.6**	**272.4**	**8.9**	**366.5**	**199.6**	**53.8**

SOURCE: CARB, 2008

Table 4.3-4: Kern County–Mojave Desert Air Basin Estimated Annual Average Emissions (Tons/Day)

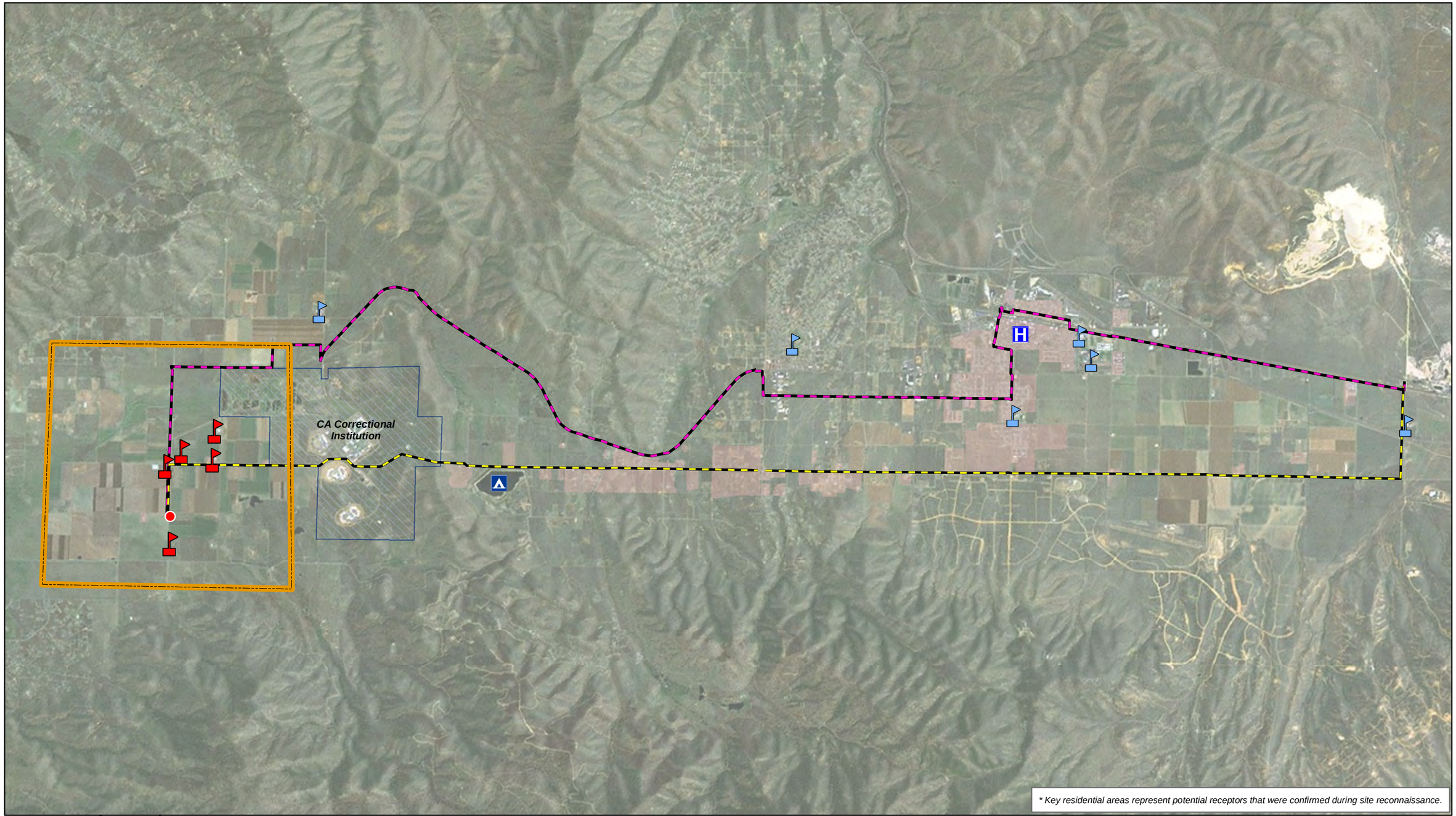
Sources	TOG	ROG	CO	NO_X	SO_X	PM	PM_{10}	$PM_{2.5}$
Stationary Sources	8.4	1.2	11.1	20.3	3.5	10.4	6.4	2.5
Areawide Sources	4.9	2.1	3.9	0.3	0	41.5	20.8	3.3
Mobile Sources	12.6	11.3	81.5	38.9	0.4	4.5	4.4	4.1
Total for Mojave Desert Air Basin	**26.0**	**14.7**	**96.5**	**59.5**	**4.0**	**56.4**	**31.6**	**9.9**

SOURCE: CARB, 2008

4.3.1.1 Sensitive Receptors

Some land uses are considered more sensitive than others to changes in air quality, depending on the population groups and the activities involved. The California Air Resources Board (CARB) has identified the following as being the groups most likely to be affected by air pollution: children under 14, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. As such, sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes (TAHA, 2012).

The nearest sensitive receptor to the proposed Banducci Substation site is a residence which is located approximately 0.25 mile south of the proposed Banducci Substation site. Several sensitive receptors, including a park, six schools, and a hospital, are located within 1 mile of the Proposed Project's proposed telecommunications facilities. The nearest park is Brite Valley Aquatic Recreation Area, which is located approximately 200 feet south of the proposed telecommunications facilities. Six schools are located less than 1 mile from the nearest proposed telecommunications facility: Cummings Valley Elementary, Golden Hills Elementary, Tompkins Elementary, Jacobsen Middle, Monroe High (Continuation), and Tehachapi High. The nearest hospital is Tehachapi Hospital, which is located approximately 940 feet northeast of the nearest proposed telecommunications facility (Figure 4.3-1 Sensitive Receptors).



Environmental Intelligence. 28 March 2012. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_03_Sensitive_Receptors_EI05_20120328.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Brite Valley Aquatic Recreation Area
- School
- Hospital
- Confirmed Residences within 1 mile of Proposed Banducci Substation
- Key Residential Areas within 0.25 mile of Proposed Telecom Routes*
- Proposed Telecommunications Route 2
- Proposed Telecommunications Route 1

N W E S

0 0.5 1 2 Miles

Figure 4.3-1: Sensitive Receptors
Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

4.3.2 Regulatory Setting

The regulatory framework that is discussed in this section identifies the federal, State, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to air quality.

4.3.2.1 Federal

Federal Clean Air Act

The Federal Clean Air Act (CAA) requires federally supported activities to conform to the State Implementation Plan (SIP), the purpose of which is to attain and maintain the National Ambient Air Quality Standards (NAAQS). The United States Environmental Protection Agency (EPA) is responsible for enforcing the CAA. The EPA sets NAAQS. NAAQS sets forth two types of standards: primary and secondary. Primary standards are designed to protect public health, including sensitive individuals such as children and the elderly, whereas secondary standards are designed to protect public welfare, such as visibility and crop or material damage.

The EPA regulates emission sources, such as aircraft, ships, and certain types of locomotives, that are under the exclusive authority of the federal government. The EPA has jurisdiction over emission sources outside State waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet stricter emission standards established by CARB.

Although the Proposed Project is not considered a federal action, the EPA, under the provisions of the Federal CAA, requires each state with regions that have not attained the NAAQS to prepare an SIP, detailing how these standards are to be met in each local area. The CARB is the State agency responsible for the development of the SIP. The regional and local districts and agencies prepare local attainment plans and submit them to the CARB for acceptance and implementation into the SIP.

As required by the federal CAA, NAAQS have been established for seven major air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), suspended particulate matter 2.5 (smaller than 2.5 microns) ($PM_{2.5}$), particulate matter 10 (smaller than 10 microns) (PM_{10}), sulfur dioxide (SO_2), and lead (Pb). The CAA requires the EPA to designate areas as attainment, nonattainment, or maintenance (i.e., previously nonattainment and currently attainment) for each criteria pollutant, based on whether the NAAQS have been achieved in that area. The EPA has classified the Mojave Desert Air Basin as nonattainment for 8-hour O_3 and 24-hour PM_{10}. The remaining pollutants are unclassified.

4.3.2.2 State

California Clean Air Act

In California, the California Clean Air Act of 1988 (CCAA) is administered by the CARB at the State level and by the AQMDs and air pollution control districts (APCDs) at the regional and local levels. The CARB, which became part of the California EPA in 1991, is responsible for meeting the State requirements of the Federal CAA, administering the CCAA, and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA, as amended in 1992, requires all air districts in the State to work to achieve and maintain the CAAQS. CAAQS are generally more stringent than the corresponding federal standards for the same pollutant, and CAAQS incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. The CARB also regulates mobile air pollution sources, such as motor vehicles. The CARB is also responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. The CARB further oversees the functions of local AQMDs and APCDs, which in turn administer air quality activities at the regional and county levels.

The CCAA requires all air pollution control districts in the State to work to achieve and maintain State ambient air quality standards by the earliest practicable date and to develop plans and regulations specifying how they will meet this goal.

4.3.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Eastern Kern Air Pollution Control District Regulations

The EKAPCD regulates the local requirements for the air quality related regulations Rule 401 and Rule 402 (TAHA, 2012).

Rule 401

EKAPCD adopted Rule 401 to provide guidelines related to visible emissions. Subject to certain exceptions not applicable here (such as fires set or approved by any public officer and certain agricultural operations), all potentially applicable sources of air pollution that are within the jurisdiction of the EKAPCD are subject to Rule 401.

Rule 402

EKAPCD also adopted Rule 402 to reduce the amount of PM_{10} from significant man-made sources of fugitive dust, such as construction activities or other operations. Rule 402 is further intended to reduce the amount of PM_{10} in an amount sufficient to maintain NAAQS. It is mandatory for all construction projects in the Mojave Desert Air Basin to comply with EKAPCD Rule 402 for Fugitive Dust.

Eastern Kern Air Pollution Control District California Clean Air Act Ozone Air Quality Attainment Plan

The EKAPCD California Clean Air Act Ozone Air Quality Attainment Plan was approved by the CARB on February 18, 1993. EKAPCD's most recent Annual Implementation Progress Report for this attainment plan was completed in December 15, 2005. The implementation progress report notes that KCAPCD is recognized by CARB staff as a nonurbanized, moderate ozone nonattainment district overwhelmingly impacted by upwind transport (TAHA, 2012).

The majority of the ambient ozone pollution in the area consists of pollutants that have been transported by the wind from the San Joaquin Valley and South Coast Air Basins. The implementation progress report indicates that no additional control measures are required for attainment of the ozone CAAQS and attainment will occur by reducing the pollution in these adjacent air basins (TAHA, 2012).

Eastern Kern Air Pollution Control District Ozone Redesignation Request and Maintenance Plan

On January 9, 2003, the EKAPCD developed an Ozone Redesignation Request and Maintenance Plan for the federal 1-hour ozone standard. The Ozone Attainment Demonstration, Maintenance Plan, and Redesignation Request document concludes that an attainment of the 1-hour ozone standard has been approved by the USEPA in and deemed a maintenance area. As of February 2008, the EKAPCD has filed an Ozone Early Progress Plans to reclassify the 8-hour ozone standard, and U.S. EPA is reconsidering the level of the federal 8-hour ozone standard. The initial 8-hour ozone standard attainment plan is not yet due to the U.S. EPA. The 1-hour ozone maintenance plan requires no new control measures for maintaining attainment of the 1-hour standard (TAHA, 2012).

Kern County General Plan

The following goals and policies of the Kern County General Plan would be relevant to the Proposed Project (Kern County, 2009):

Goals

- Goal 1. To encourage the safe and orderly development of transmission lines to access Kern County's electrical resources along routes, which minimize potential adverse environmental effects (Energy Element).[1]

- Goal 2. To coordinate congestion management and air quality requirements and avoid multiple and conflicting requirements (Circulation Element).

Policies

- Policy 18. The air quality implications of new discretionary land use proposals shall be considered in approval of major developments. Special emphasis will be replaced on minimizing air quality degradation in the desert to enable effective military operations and in the valley region to meet attainment goals (Land Use, Open Space, and Conservation Element).

- Policy 21. The County shall support air districts' efforts to reduce PM_{10} and $PM_{2.5}$ emissions (Land Use, Open Space, and Conservation Element).

- Policy 22. The County shall continue to work with the San Joaquin Valley Unified Air Pollution Control District and Kern County Air Pollution Control District toward air quality attainment with Federal, State, and local standards (Land Use, Open Space, and Conservation Element).

- Policy 23. The County shall continue to implement the local government control measures in coordination with the Kern Council of Governments and the San Joaquin Valley Unified Air Pollution Control District (Land Use, Open Space, and Conservation Element).

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a

[1] This goal is not assigned a number in the Kern County General Plan. However, the number 1 has been assigned to this goal in this section for consistency in this PEA document.

GTA Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

4.3.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- Conflict with or obstruct implementation of the applicable air quality plan?
- Violate any air quality standard as adopted in the EKAPCD, or as established by the EPA or air district or contribute substantially to an existing or projected air quality violation?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?
- Expose sensitive receptors to substantial pollutant concentrations?
- Create objectionable odors affecting a substantial number of people?

4.3.4 Impact Analysis

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

Construction Impacts

Less Than Significant Impact. The Proposed Project would comply with the rules, regulations, and guidelines provided in the EKAPCD's CAA Ozone Air Quality Attainment Plan (AQAP). Construction of the Proposed Project would not involve activities that would conflict with the AQAP. The majority of the ambient ozone pollution in the area consists of pollutants that have been transported by the wind from the San Joaquin Valley and South Coast Air Basins. The implementation progress report indicates that no additional control measures are required for attainment of the ozone CAAQS, attainment will occur by reducing the pollution in these adjacent air basins.

The Proposed Project would not result in significant regional construction emissions and thus would not interfere with the attainment of air quality standards. Construction activity would not conflict or obstruct implementation of the AQAP and would result in a less than significant impact.

Operational Impacts

Less Than Significant Impact. The Proposed Project would comply with the EKAPCD's AQAP. Once construction is complete, operational emissions would result from mobile sources, such as vehicles necessary for periodic inspection, maintenance, and repair of the Proposed Project components. No stationary emission sources would be associated with the Proposed Project. Operational emissions would not be significant. These activities would also be consistent with the policies, plans, and regulations for air quality as provided in the AQAP. Therefore, operation of the Proposed Project would not be expected to conflict with or obstruct the implementation of the applicable air quality plan.

Would the project violate any air quality standard as adopted in the EKAPCD or as established by EPA or air district or contribute substantially to an existing or projected air quality violation?

Construction Impacts

Less Than Significant Impact. The Proposed Project would be located in a nonattainment area for O_3 and PM_{10}. However, because the Proposed Project would be constructed in compliance with the established rules and guidelines as adopted by the EKAPCD, and would not exceed any thresholds established by EKAPCD, the Proposed Project would not violate any air quality standard or contribute substantially to an existing air quality violation.

Operational Impacts

Less Than Significant Impact. Operation of the Proposed Project would comply with the established rules and guidelines as adopted by the EKAPCD and would not exceed any thresholds established by EKAPCD. Once construction is complete, operational emissions would result from mobile sources, such as vehicles that would be necessary for periodic inspection, maintenance, and repair of the Proposed Project components. No stationary emissions sources would be associated with the Proposed Project. As such, impacts related to a violation of air quality standards would be less than significant.

Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? Specifically, would implementation of the project exceed any of the adopted thresholds:

Construction Impacts

Less Than Significant Impact. The EKAPCD construction emissions thresholds are provided in Table 4.3-5: EKAPCD Construction Emissions Thresholds. These thresholds only apply to pollutants for which the region is a nonattainment area (e.g., PM_{10} and ozone precursors).

Table 4.3-5: EKAPCD Construction Emissions Thresholds

Criteria Pollutant	Regional Emissions (Tons Per Year)
Volatile organic compounds (VOC)	25
Nitrogen oxides (NO_X)	25
Particulate Matters (PM_{10})	15

SOURCE: EKAPCD, Rule 210.1 (TAHA, 2012)

The air quality emission estimates for the Proposed Project are provided in Table 4.3-6: Air Quality Construction Impacts for the Proposed Project. As noted in the table, construction activities would not be expected to exceed the established air quality–related emissions thresholds for the Proposed Project Study Area. As further demonstrated in the table, construction of the Proposed Project would not be expected to contribute to a cumulatively significant net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard.

Table 4.3-6: Air Quality Construction Impacts for the Proposed Project

	Air Pollutant (Tons per Year)		
Construction Phase	**VOC**	**NO_X**	**PM_{10}**
Banducci Substation Construction	0.50	3.66	8.06
Distribution Getaway Installation	0.02	0.18	0.01
Subtransmission Line Segment Installation	0.25	2.03	0.09
Telecommunication Construction	0.15	0.95	0.04
Total Proposed Project Construction Emissions	**0.88**	**6.83**	**8.20**
Regional Significance Threshold	**25**	**25**	**15**
Exceed Threshold?	No	No	No

SOURCE: TAHA, 2012

Operation Impacts

Less Than Significant Impact. Once construction is complete, operation emissions would be expected to result from vehicle emissions. Vehicle travel to the Proposed Project would be necessary for periodic inspection, maintenance, and repairs of the Proposed Project components. The number of vehicles and the number of vehicle trips would be fewer than during construction and as such the anticipated emissions would not be expected to exceed the established threshold. No stationary emissions sources would be associated with the Proposed Project (TAHA, 2012). Therefore, emissions from operation would not be significant (TAHA, 2012). Operation of the Proposed Project would not be expected to contribute to a cumulatively significant net increase of any criteria pollutant for which the Proposed Project region is nonattainment under an applicable federal or State ambient air quality standard.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction Impacts

Less Than Significant Impact. Construction-related activities would not be expected to expose sensitive receptors to substantial pollutant concentrations. The only considerable potential sources of air quality–related pollution associated with construction of the Proposed Project would be expected to occur at an immediately adjacent to the proposed Banducci Substation. Construction-related sources of pollution at these locations would include grading, construction machines, equipment, and construction staff vehicles. The nearest residence (and sensitive receptor) to the proposed Banducci Substation site is located approximately 0.25 mile south of the proposed Banducci Substation site. The nearest school to the Proposed Project components is Monroe High (Continuation) School, which is located roughly 155 feet east of the nearest proposed telecommunications facility. However, the amount of construction-related activities that would occur along the proposed telecommunications infrastructure (and within the laydown yards) would be negligible and therefore would not emit substantial pollutant concentrations.

The Proposed Project would not be expected to result in significant regional construction emissions and thus would not interfere with the attainment of air quality standards (TAHA, 2012). Construction activity would not conflict or obstruct implementation of the AQAP, which is designed to protect the air quality of the individuals residing in the Mojave Desert Air Basin. As such, construction-related activities associated with the Proposed Project would be expect to result in less than significant impacts related to the potential to expose sensitive receptors to substantial pollutant concentrations.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would not be expected to expose sensitive receptors to substantial pollutant concentrations. During operation of the Proposed Project, air quality pollution from the Proposed Project would be limited in scope. The travel of maintenance staff to the Proposed Project Study Area would be expected to create potential sources of air pollutants; however the levels would not be such that they would be considered a substantial pollutant source (TAHA, 2012). As during construction, the key source

of potential air pollution would be the proposed Banducci Substation and the new and replaced poles associated with the proposed telecommunication facilities, which would not be anticipated to create or exacerbate air quality pollution in the area. As noted above, the nearest residence is located approximately 0.25 mile south of the proposed Banducci Substation location. During operation, the Proposed Project would not involve activities that would be expected to result in the creation of substantial air pollutants (TAHA, 2012). Therefore, operation of the Proposed Project would be expected to result in less than significant impacts related to the potential to expose sensitive receptors to substantial pollutant concentrations.

Would the project create objectionable odors affecting a substantial number of people?

Construction Impacts

Less Than Significant Impact. Potential sources of objectionable odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the immediate area surrounding of the source within the Proposed Project Study Area. The anticipated odors associated with the Proposed Project would be typical of most construction sites and temporary in nature (TAHA, 2012).

During construction, it would be anticipated that certain activities, such as paving the access driveway to the proposed Banducci Substation, would create odors due to the use of certain materials that may be considered objectionable to some individuals passing by the construction areas. However, it is anticipated that a majority of these construction-related tasks would be brief (i.e., lasting only a few days) and would be limited to a small portion of the Proposed Project. The Proposed Project would utilize typical construction techniques and the odors would be typical of most construction sites and temporary in nature (TAHA, 2012). Additionally, the Proposed Project would not be located in a heavily populated or accessed area and as such would not be expected to expose a substantial number of people to objectionable odors.

The nearest sensitive receptors to the Proposed Project include a residential structure that is located approximately 0.25 mile south of the proposed Banducci Substation location and Monroe High (Continuation) School, which is located roughly 155 feet east of the nearest proposed telecommunications facility. However, construction near these locations would not be expected to cause an odor nuisance at either location. Due to the limited size and manner of the anticipated sources of odors associated with the Proposed Project, odors created by construction at the proposed Banducci Substation location (which would also be the primary staging area for the Proposed Project) would likely dissipate prior to reaching the residence. The odors associated with the proposed telecommunications facilities, which could include exhaust fumes, would be minimal, and it is not anticipated that such odors would affect a substantial number of people. The exhaust, along with other odors emitted during work along the proposed telecommunications routes, would be negligible as would any odors emitted from the potential staging areas (TAHA, 2012). Therefore, the construction of the Proposed Project would be expected to result in a less than significant impact to air quality related to creating objectionable odors that would affect a substantial number of people.

Operation Impacts

No Impact. Operation of the Proposed Project would not be expected to create new or exacerbate existing objectionable odors. Operation of the Proposed Project would entail the functions associated with transforming and transmitting electricity at a small, unstaffed substation and would not be expected to have activities that would create odors. Additionally, as noted above, the Proposed Project would be located in a rural area that is not heavily populated or accessed. As such, operation of the Proposed Project would not be expected to result in a significant impact related to creating objectionable odors that would affect a substantial number of people.

4.3.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for air quality.

4.3.6 Alternative

Site Alternative B

Like the Proposed Project, Site Alternative B would be expected to result in less than significant impacts related to air pollutant emissions. Under Site Alternative B, the construction and operation scenarios, including the equipment, personnel, vehicles and activities, would be similar to the Proposed Project. However, Site Alternative B would require the demolition of an existing structure that would require increased use of equipment and vehicles during construction, and therefore, increased air pollutant emissions. This increase in emissions would not be expected to exceed the thresholds that have been established for air emissions for the Proposed Project. The anticipated air emissions and related impacts associated with Site Alternative B would be expected to be less than significant.

Overall, because Site Alternative B would require demolition, the anticipated impacts related to air quality for this alternative would be slightly greater than the potential impacts associated with the Proposed Project. However, like the Proposed Project, the anticipated air quality impacts for Site Alternative B would be less than significant.

4.3.7 References

California Air Resources Board. (2011). *Mojave Desert Air Basin*. Retrieved September 5, 2011, from http://www.arb.ca.gov/ei/maps/basins/abmdmap.htm and http://www.arb.ca.gov/desig/adm/adm.htm

Eastern Kern Air Pollution Control District (EKAPCD). (2012). Retrieved from http://www.kernair.org/

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Terry A. Hayes Associates (TAHA). (2012). *Banducci Substation Project Air Quality Report.* Culver City, CA.

4.4 Biological Resources

4.4.1 Overview

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to biological resources associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts to biological resources.

This analysis describes the existing and proposed conditions of biological resources in the Proposed Project Study Area, evaluates the relevant components and characteristics, and assesses the potential impacts that could occur as a result of the Proposed Project.

4.4.2 Methodology

Southern California Edison (SCE) consultant Plegadis LLC undertook a biological resources assessment for the Proposed Project (Figure 4.4-1: Project Location). The survey area encompassed the proposed Banducci Substation site at the southwestern terminus of the Proposed Project alignment (Figure 4.4-2: Topography), a proposed and existing subtransmission line route, and proposed telecommunications routes.

Literature Review

Biologists reviewed available regional and local natural resources information, including published and unpublished documents and herbarium records, prior to undertaking field surveys. Site-specific information reviewed included, but was not limited to, the following sources:

- California Department of Fish and Game (CDFG). (2011). *California Natural Diversity Database*, Sacramento, CA.
- Plegadis LLC. 2010–2011 Surveys for the East Kern Wind Resources Area.
- SWCA. (2010). *Biological Resources Assessment for the Greater Tehachapi Area Specific and Community Plan*.
- U.S. Geological Survey. (2005). *Keene, California, 7.5-minute Series Topographic Quadrangle*. Washington, DC: United States Department of the Interior.
- U.S. Geological Survey. (2009). *Cummings Mountain, California, 7.5-minute Series Topographic Quadrangle*. Washington, DC: United States Department of the Interior.
- U.S. Geological Survey. (2009). *Tehachapi North, California, 7.5-minute Series Topographic Quadrangle*. Washington, DC: United States Department of the Interior.
- U.S. Geological Survey. (2009). *Tehachapi South, California, 7.5-minute Series Topographic Quadrangle*. Washington, DC: United States Department of the Interior.

Additionally, species occurrences from the CDFG California Natural Diversity Database (CNDDB) RareFind3 (CDFG 2003, as updated 2011) and the California Native Plant Society

Figure 4.4-1 Project Location

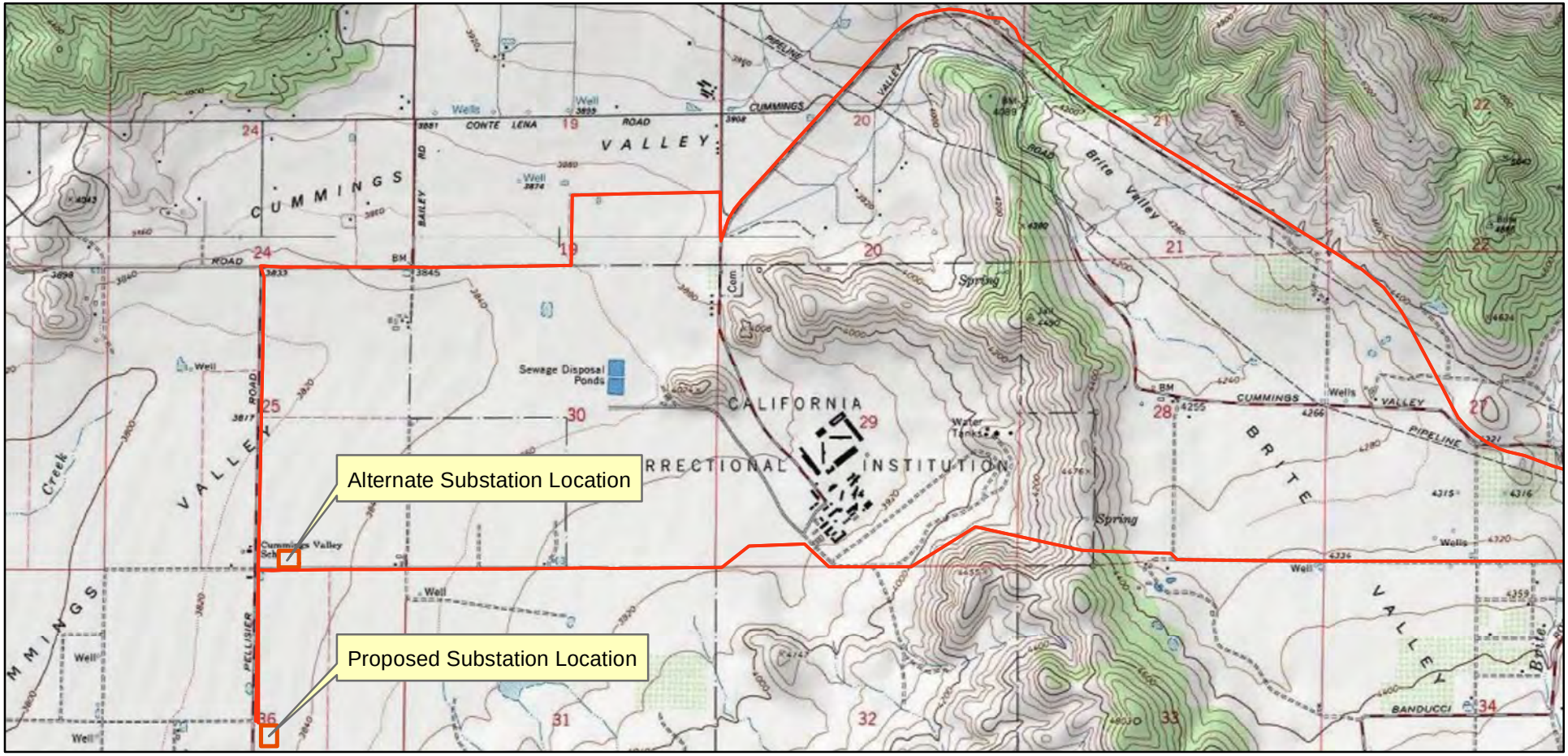
Legend

Proposed Project Alignment

0 5 10 20 30 40

Miles

Figure 4.4-2a. Topography

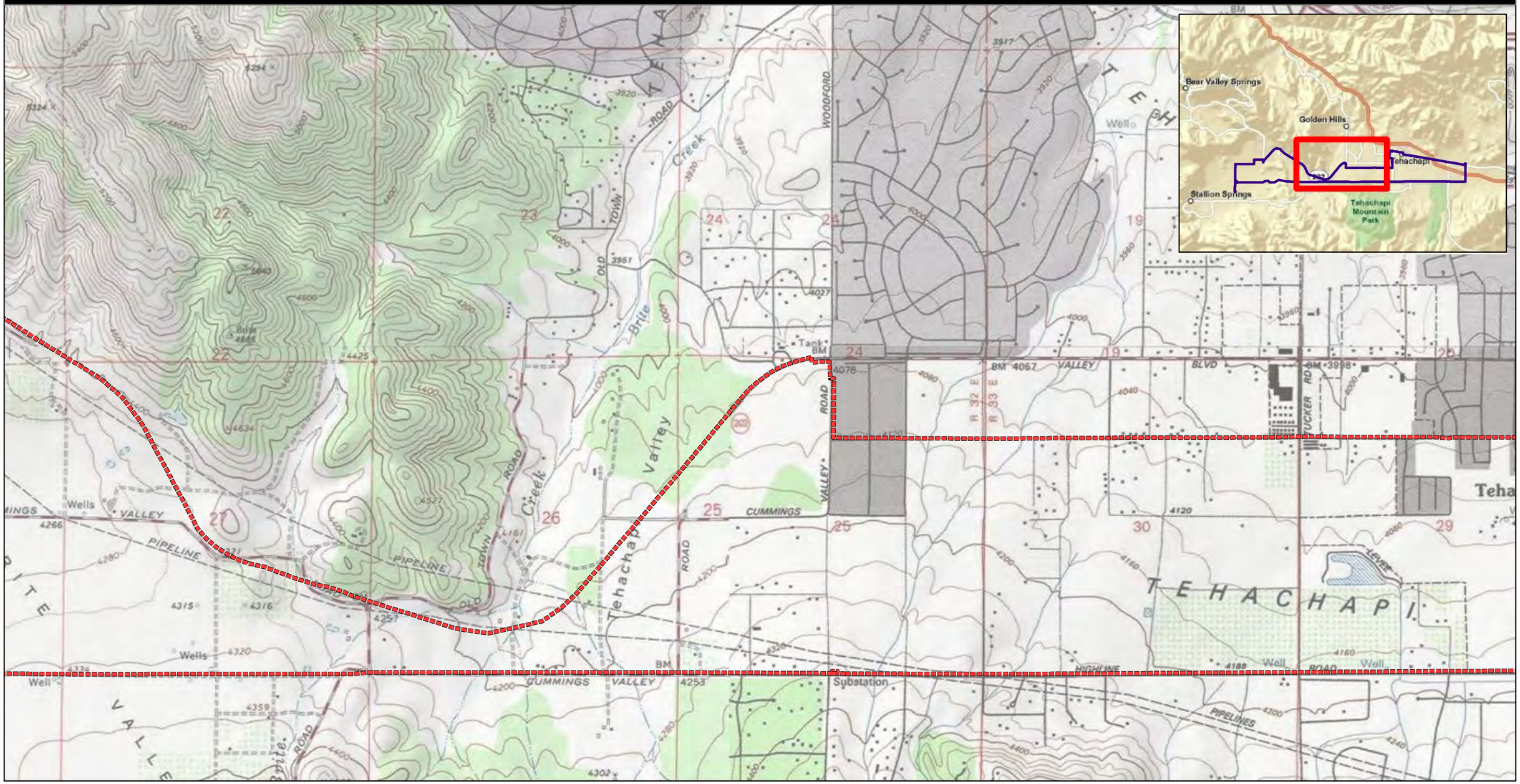


Legend

Subtransmission & Telecommunication Alignment Route

0 0.2 0.4 0.8 1.2 1.6
Miles

4.4-2b Topography

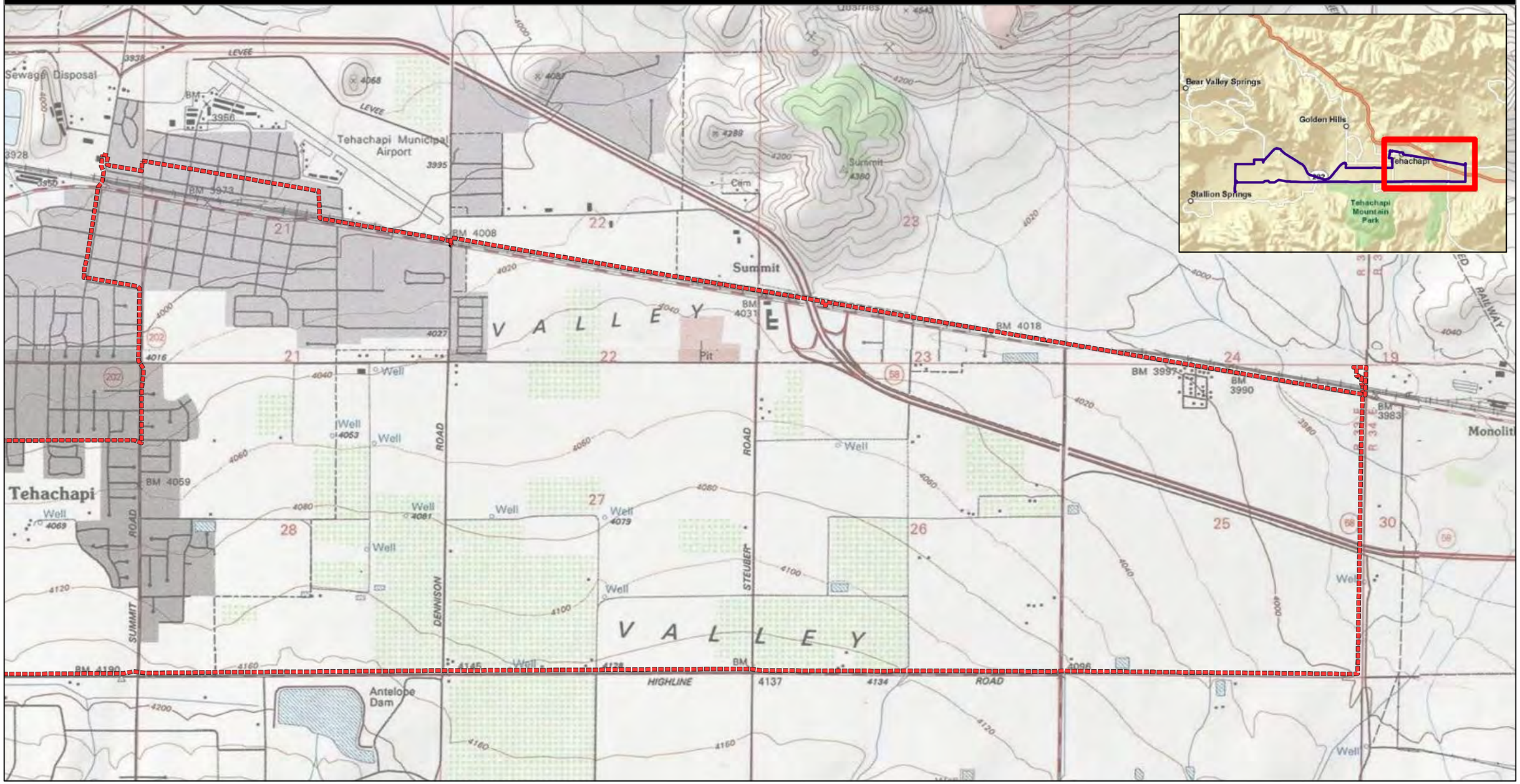


Legend

Proposed Project Alignment

0 0.25 0.5 1 1.5 2 Miles

4.4-2c Topography



Legend

Proposed Project Alignment

0 0.25 0.5 1 1.5 2 Miles

(CNPS) Online Inventory of Rare and Endangered Plants (CNPS, 2011) were queried for the topographic quadrangles in which the Proposed Project alignment is located. Additionally, biologists queried all adjacent quadrangles in the CNDDB and CNPS databases to determine which special-status plant and wildlife species required analysis within the survey area. Upon query completion, Proposed Project staff consulted the Consortium of California Herbaria, which is available on-line (http://ucjeps.berkeley.edu/consortium/).

This literature review informed and was performed in support of the botanical surveys described below.

Survey Methods

Biologists Ricardo Montijo and Karen Kirtland (of Natural Resources Assessment Inc.) documented natural resources observed within 50 feet (Focused Survey Area/Area of Potential Effect) on either side of the Proposed Project alignment during surveys conducted on December 15, 2010; March 16, 2011; April 20, 2011; May 25, 2011; June 2 and 30, 2011; and July 25, 2011.

The surveys included plant and wildlife inventories, focused surveys for burrowing owl (*Athene cunicularia*) and raptors, vegetation mapping, and preliminary demarcation of potential jurisdictional waters of the U.S. and the State. Mapping and location data were collected using ESRI ArcPad 8.0 software installed on a Trimble Juno global positioning system unit. The software allowed biologists to superimpose the Proposed Project alignment on aerial imagery and create vegetation polygons in the field. The biologists also mapped and verified vegetation to 1,000 feet on either side of the Proposed Telecommunications and Subtransmission Routes on aerial photographs scaled to 1 inch equals 238 feet (1" = 238'). Vegetation mapping follows the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland, 1986).

Surveyors noted and recorded all wildlife species encountered directly through observation or by sign (scat, remains, or tracks). Identification of certain bird and mammal species was by vocalization. The use of binoculars also facilitated wildlife identification. Similarly, surveyors recorded plant species encountered in the field, although in some instances plants were collected and subsequently identified using dichotomous keys. Taxonomic nomenclature follows California Department of Fish and Game (2006) for wildlife and Hickman (1993) for plants.

Since previous documentation had indicated the potential occurrence of burrowing owl and other sensitive raptors in the vicinity of the Proposed Project, Plegadis LLC biologists conducted surveys for burrowing owl and raptors on December 15, 2010; March 16, 2011; April 20, 2011; and May 25, 2011. The results of all biological surveys are contained in the Banducci Biological Resources Report (Plegadis, 2011)

4.4.3 Environmental Setting

General Description

The Proposed Project would be located within the Tehachapi, Brite, and Cummings Valleys in eastern Kern County (Figure 4.4-2: Topography). The valleys are nestled within the Tehachapi

Mountain Range, which is located between the northern Transverse and southern Sierra Nevada Mountain Ranges. The Tehachapi Mountain Range connects foothills and grasslands in the San Joaquin Valley to the west with high-altitude hardwood and coniferous forests in the ranges themselves to the Great Basin and Mojave Desert to the east. The confluence of these areas results in a complex set of conditions and a rich incidence of flora and fauna (Bauer, 1930; Hafner, 1977; Hawkins and Porter, 2003).

The Proposed Project Study Area is found on the Keene, Cummings Mountain, Tehachapi North, and Tehachapi South U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles. Elevations range from 3,820 feet above mean sea level (msl) at the western limits of the alignment to approximately 4,300 feet msl in its north-central portion. Soil types within the alignment include Arujo-Friant-Tunis complex, Havala sandy loams, Psamments-Xerolls complex, Steuber sandy loams, Tehachapi sandy loam, Tujunga loamy sands, Tweedy-Anaverde complex, Walong sandy loams, Walong-Edmundston associations, and Xerorthents. The Xerorthent series and phase that occurs within the mapped area is considered a hydric soil type and is a potential indicator of hydric features regulated by the State and federal governments, pursuant the Fish and Game Code and Federal CWA, respectively. Soil types found in the Proposed Project Study Area are illustrated in Figure 4.4-3: Soils.

The eastern half of the Proposed Project Study Area would be largely within Tehachapi city limits while the western half occurs in mostly rural and agricultural areas. The majority of the Proposed Project Study Area includes land located adjacent to roads such as Highline Road, Valley Boulevard, Tehachapi Boulevard, and Pelliser Road. Existing and proposed rights-of-way within the Proposed Project Study Area occur primarily within developed, agricultural, or previously disturbed land.

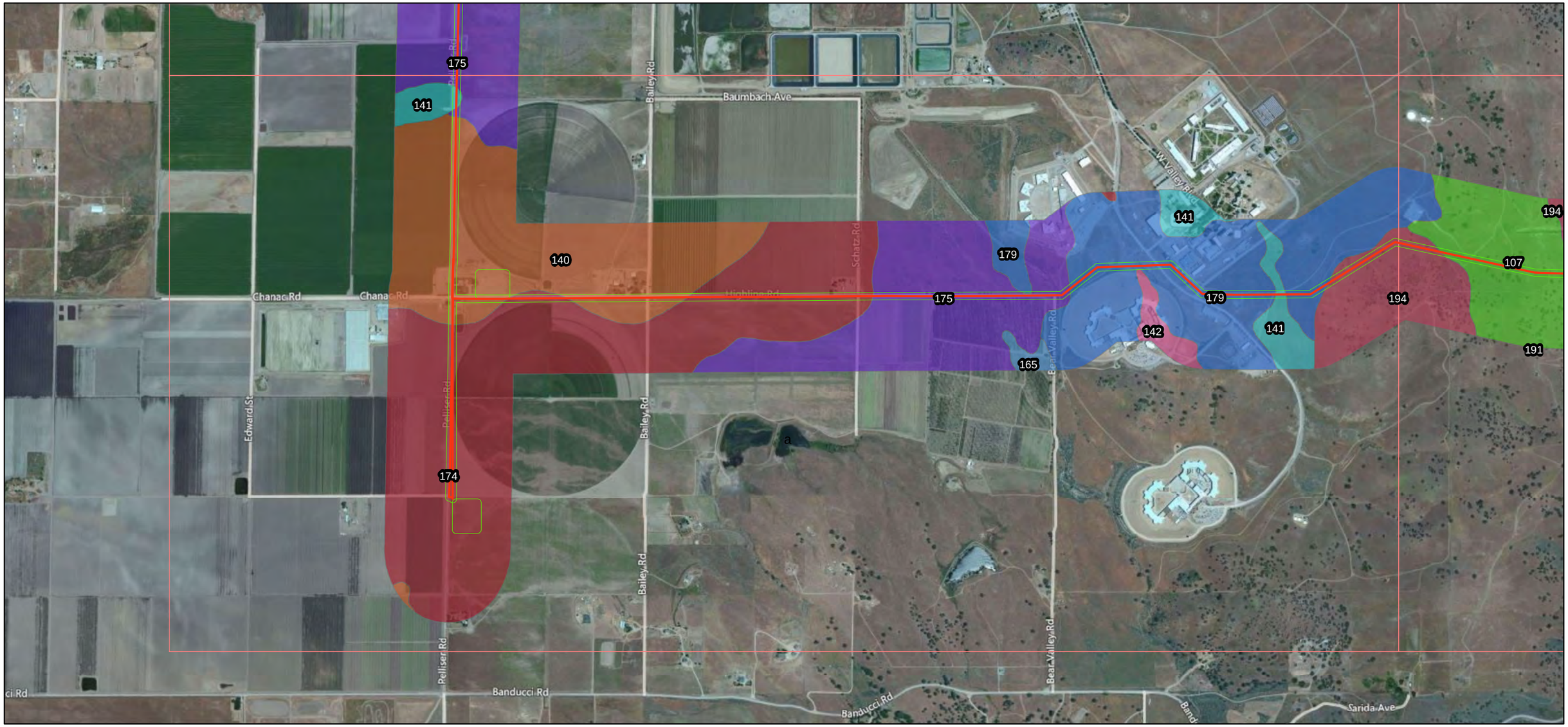
Vegetation

The Proposed Project would be largely within developed, disturbed, and agricultural areas and, therefore, primarily consists of both natural and human-influenced grasslands. Several woodland and scrub vegetation types also occur within the Focused Survey Area/Area of Potential Effect. Descriptions of dominant vegetation types and their distribution are provided below and are depicted in Figure 4.4-4: Vegetation.

Blue Oak Woodland

Blue oak (*Quercus douglasii*) is native and endemic to California and dominates nearly half of all oak woodlands in the state (Pavlik *et al*, 1991). Blue Oak Woodland is a climax community of variable canopy cover and understory that ranges from open savannahs (often at lower elevations) to fairly dense woodlands with shrubby understories (Holland, 1986). Although blue oak is the dominant species, it often occurs with foothill pine (*Pinus sabiniana*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), and interior live oak (*Quercus wislizenii*). This vegetation type occurs in well-drained soils below 3,000 to 4,000 feet (Holland, 1986).

Figure 4.4-3a Soils



Legend

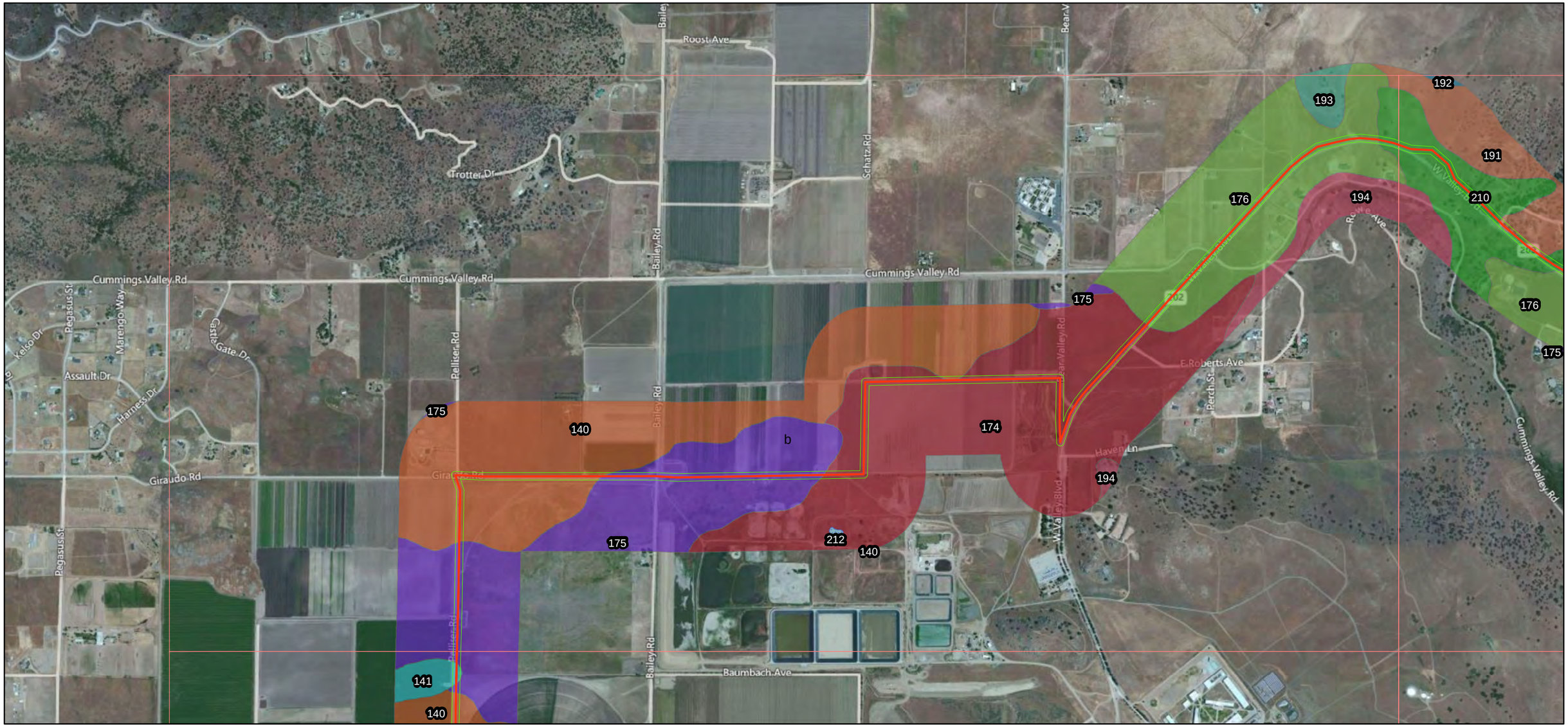
- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water

0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3b Soils



Legend

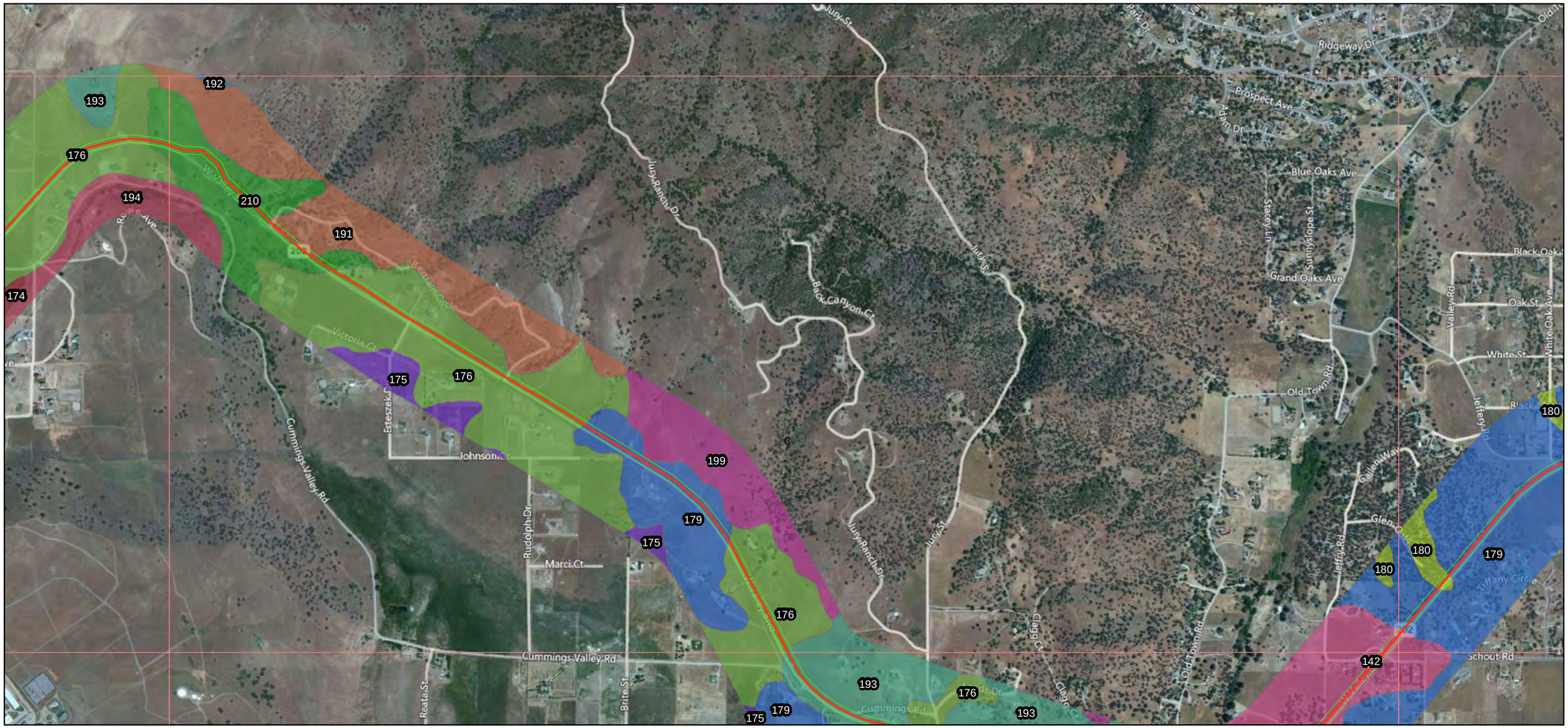
- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water

0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3c Soils



Legend

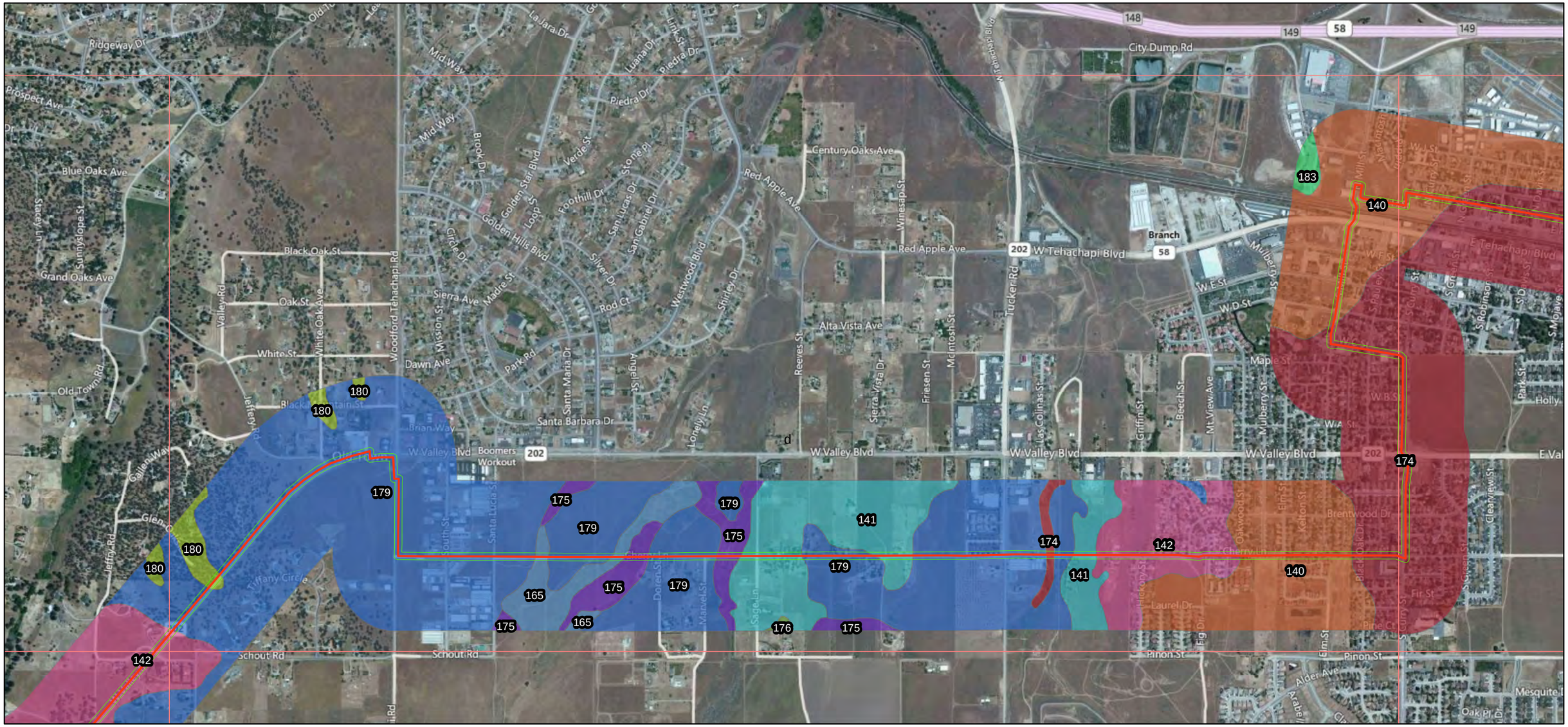
- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water

0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3d Soils

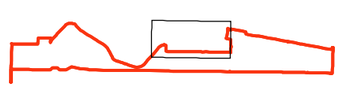


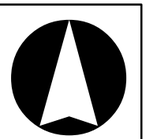
Legend

- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

Soils

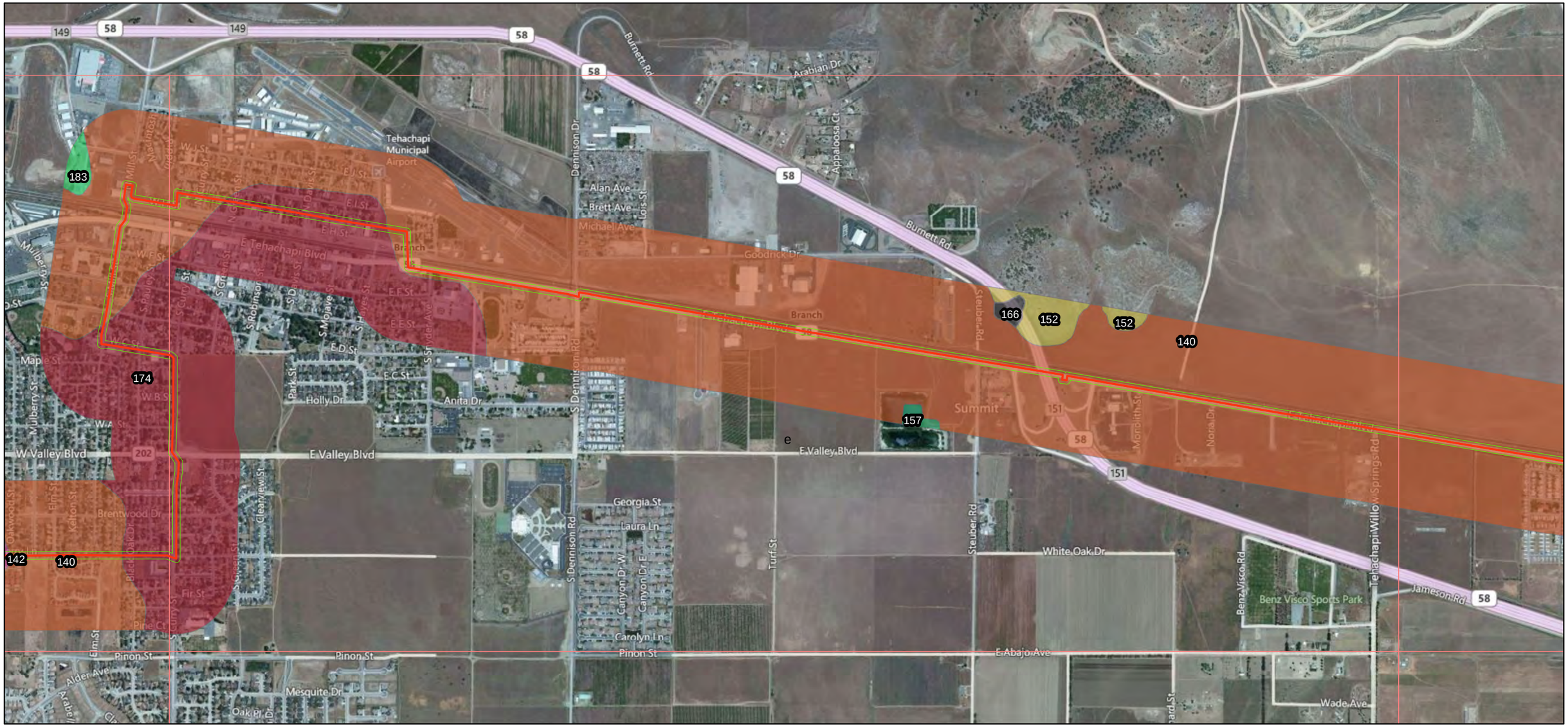
- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water





0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3e Soils



Legend

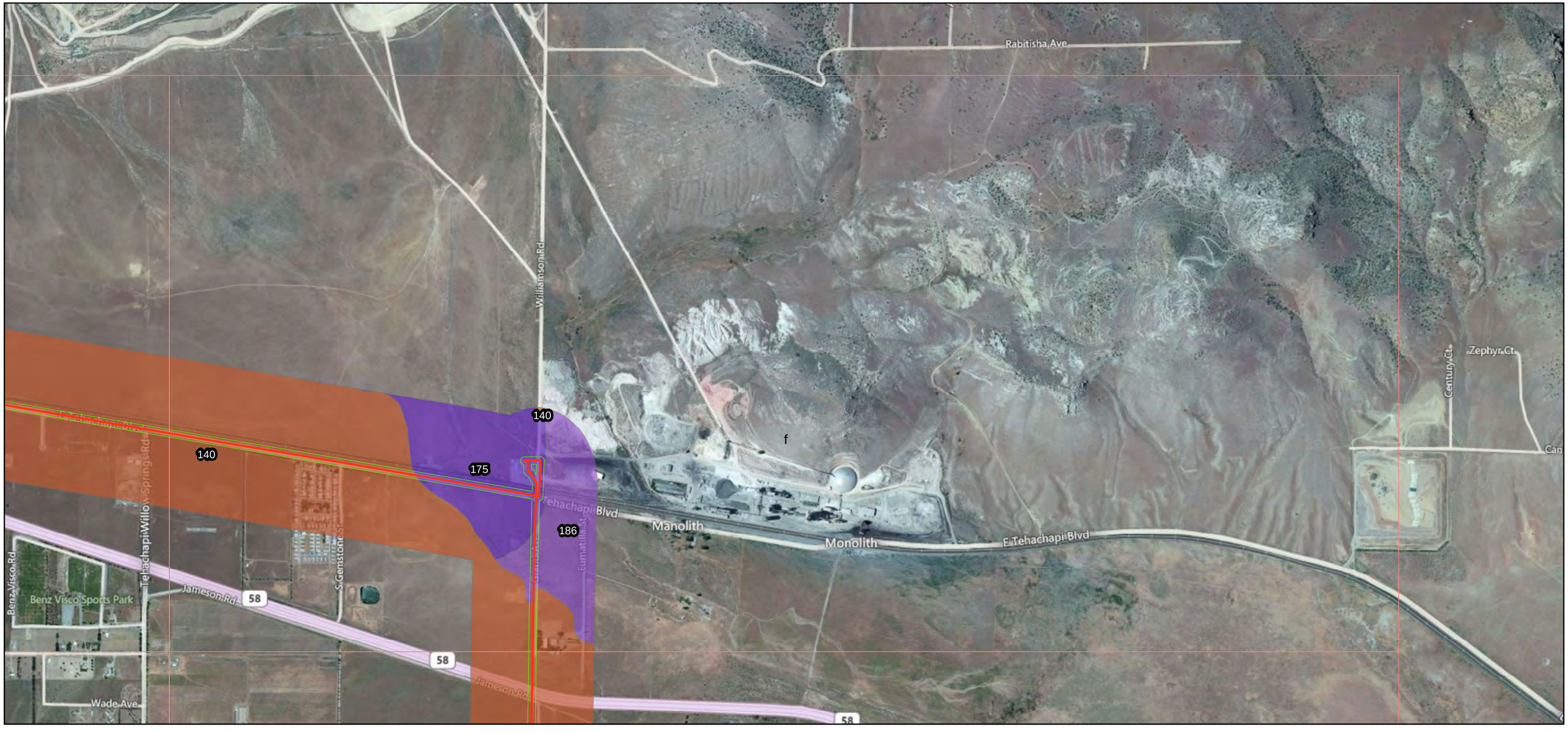
- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water

0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3f Soils



Legend

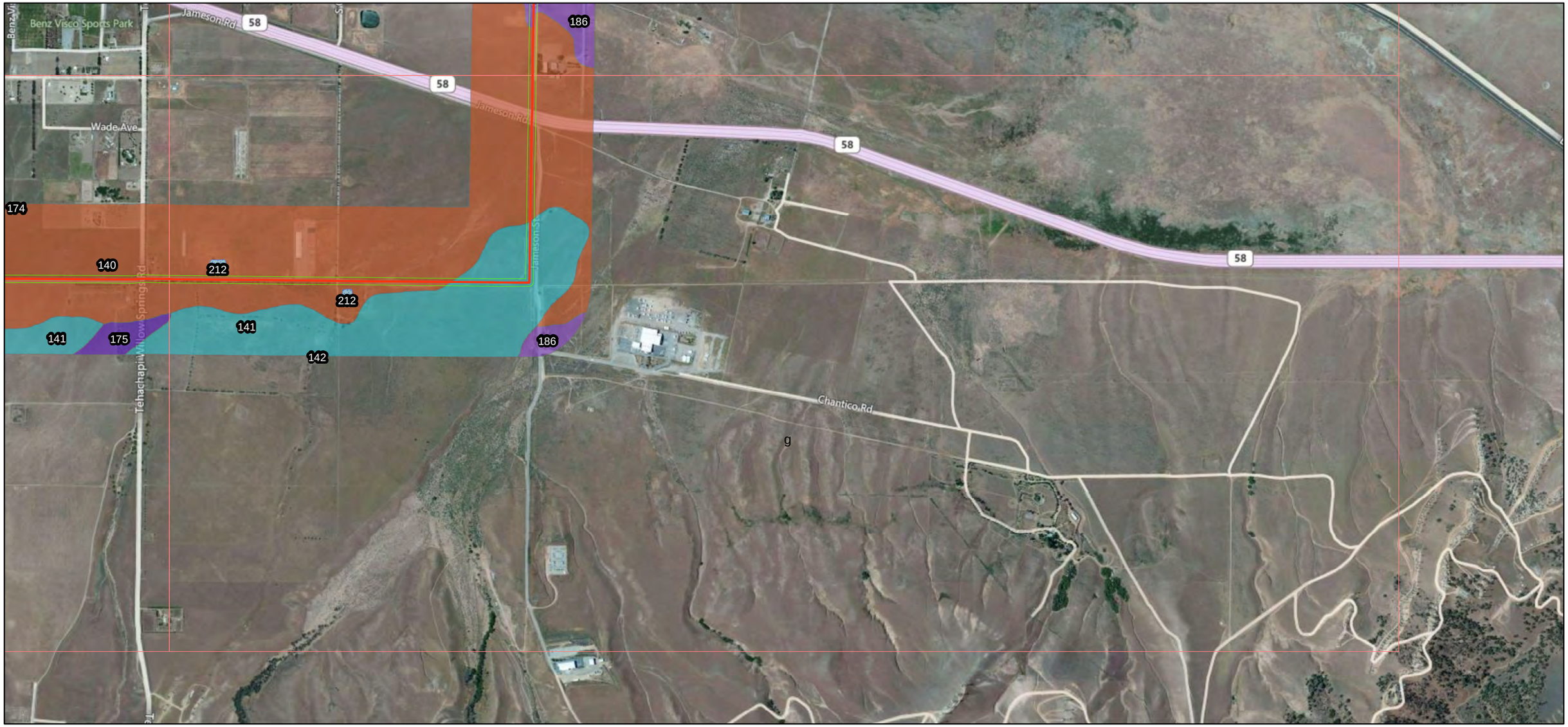
- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water

0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3g Soils



Legend

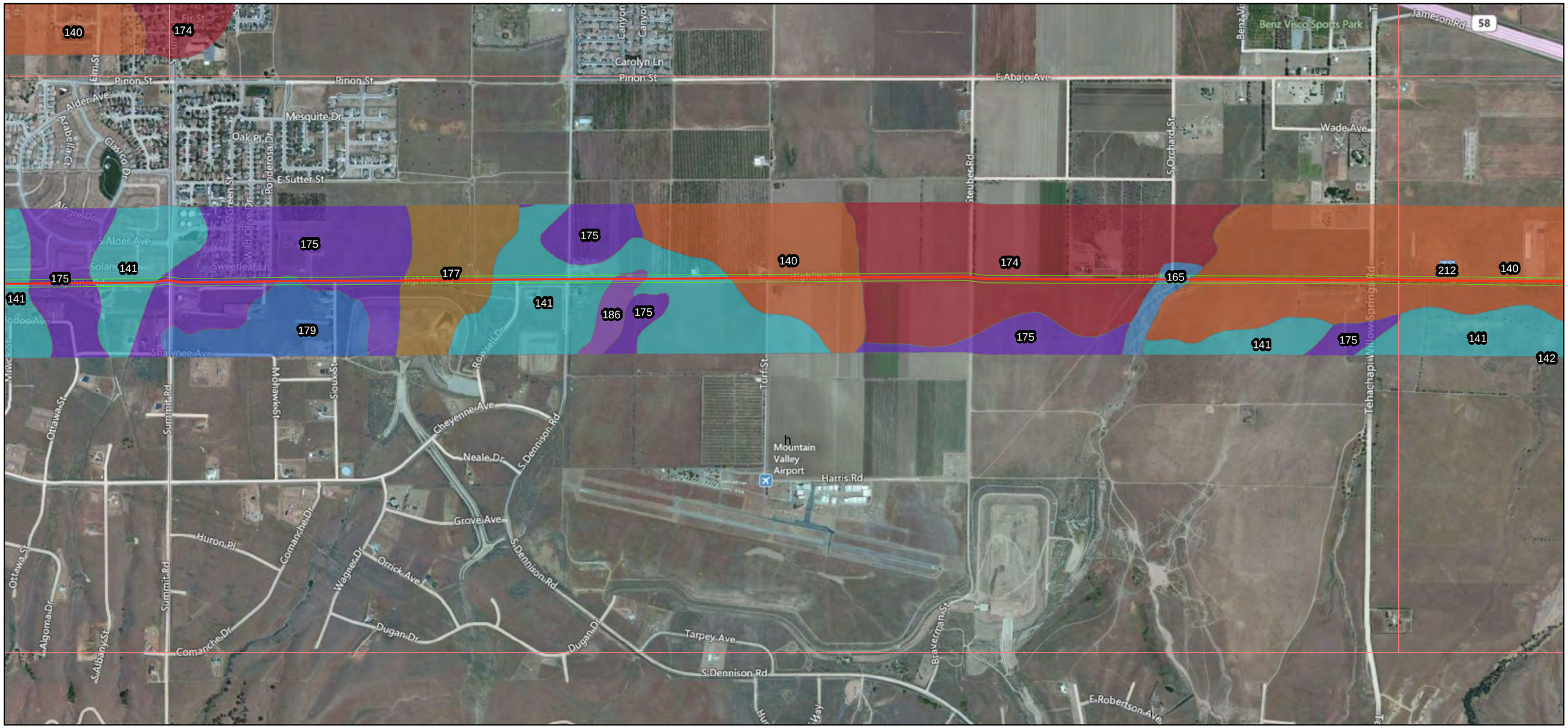
- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water

0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3h Soils

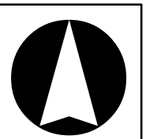


Legend

- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

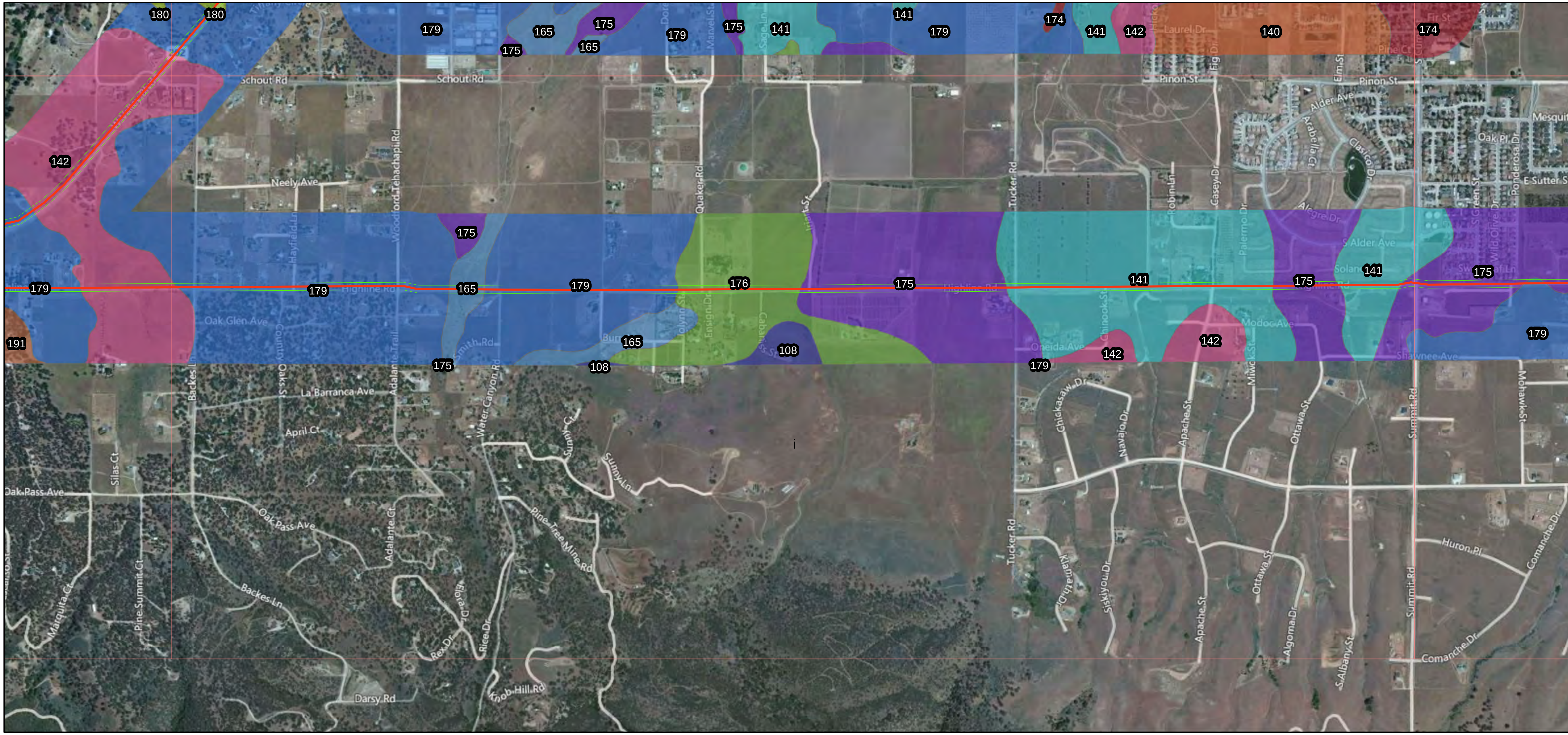
Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water



0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3i Soils

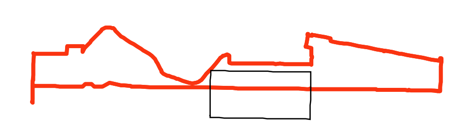


Legend

- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

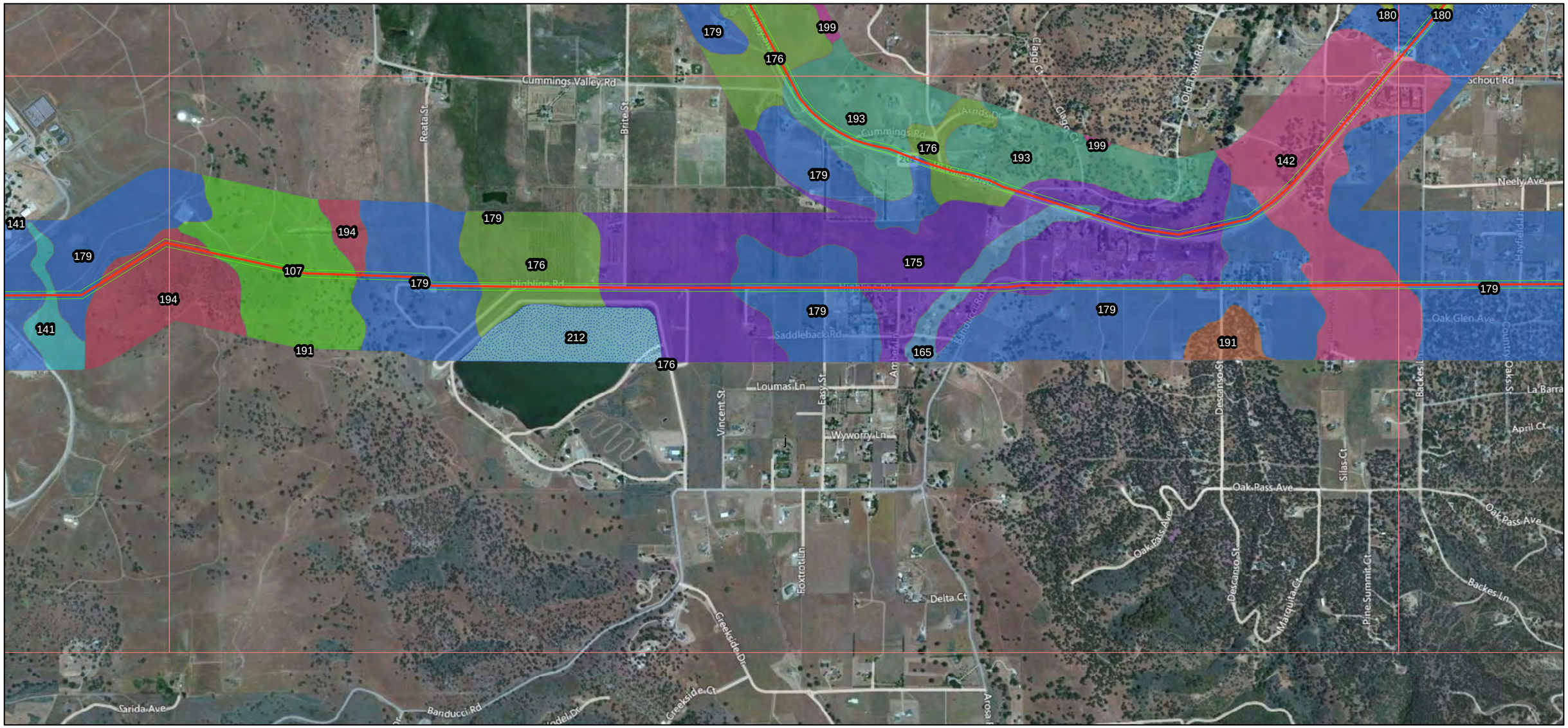
Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water



0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-3j Soils



Legend

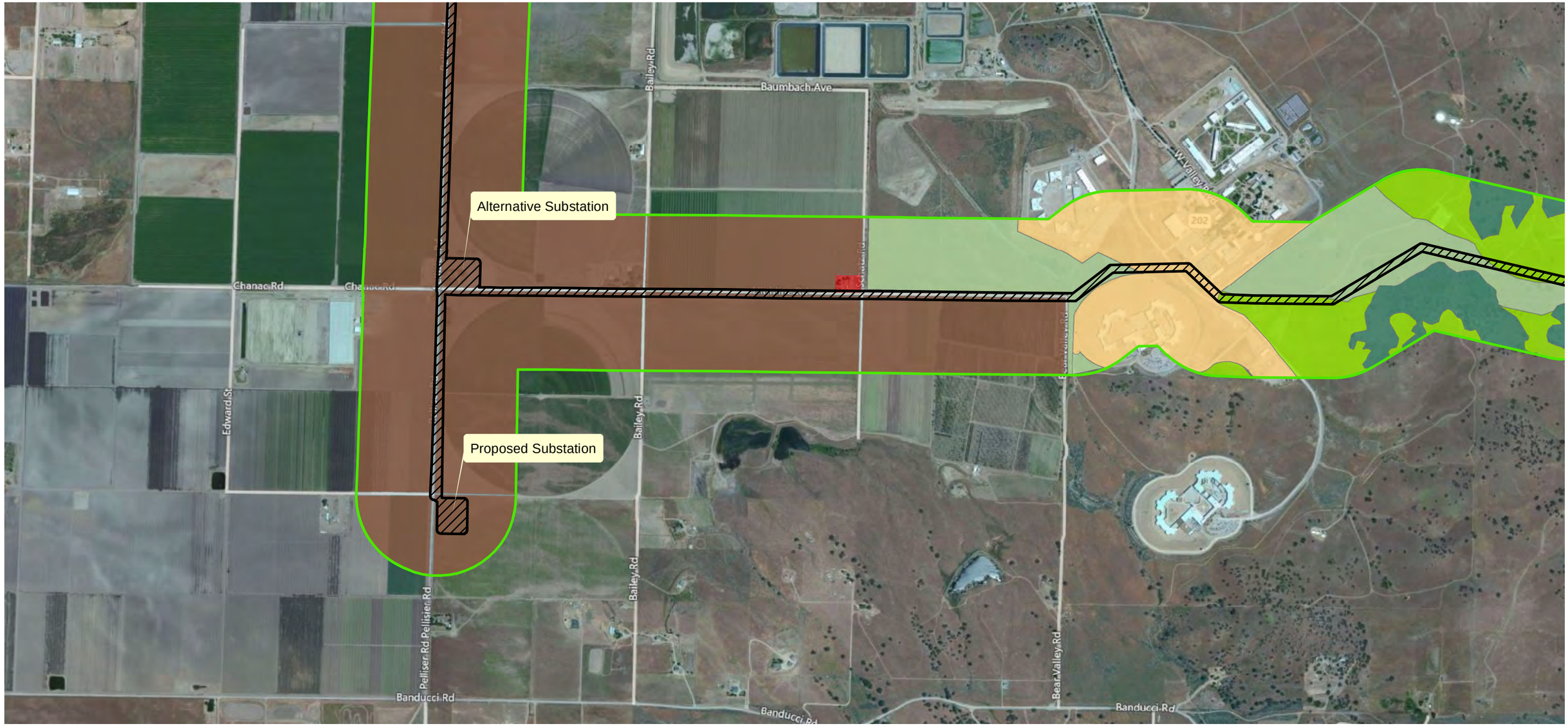
- Subtransmission & Telecommunication Alignment Route
- Project Survey Area

Soils

- 107-Arujo-Friant-Tunis complex, 15 to 50 percent slopes
- 108-Arujo-Friant-Tunis complex, 50 to 75 percent slopes
- 140-Havala sandy loam, 0 to 2 percent slopes
- 141-Havala sandy loam, 2 to 5 percent slopes
- 142-Havala sandy loam, 5 to 9 percent slopes
- 152-Nacimiento loam, 30 to 50 percent slopes, eroded
- 157-Pits
- 165-Psamments-Xerolls complex, nearly level
- 166-Quarries
- 174-Steuber sandy loam, 0 to 2 percent slopes
- 175-Steuber sandy loam, 2 to 5 percent slopes
- 176-Steuber sandy loam, 5 to 9 percent slopes
- 177-Steuber stony sandy loam, 5 to 9 percent slopes
- 179-Tehachapi sandy loam, 2 to 15 percent slopes
- 180-Tehachapi loam, 15 to 30 percent slopes, eroded
- 183-Tehachapi variant sandy clay loam, 15 to 50 percent slo pes
- 186-Tujunga loamy sand, 2 to 5 percent slopes
- 191-Tweedy-Anaverde complex, 30 to 50 percent slopes
- 192-Tweedy-Anaverde complex, 50 to 75 percent slopes
- 193-Walong sandy loam, 15 to 30 percent slopes
- 194-Walong sandy loam, 30 to 50 percent slopes
- 199-Walong-Edmundston association, steep
- 210-Xerorthents, loamy, very steep
- 212-Water

0 0.15 0.3 0.6 0.9 1.2 Miles

Figure 4.4-4.a Vegetation



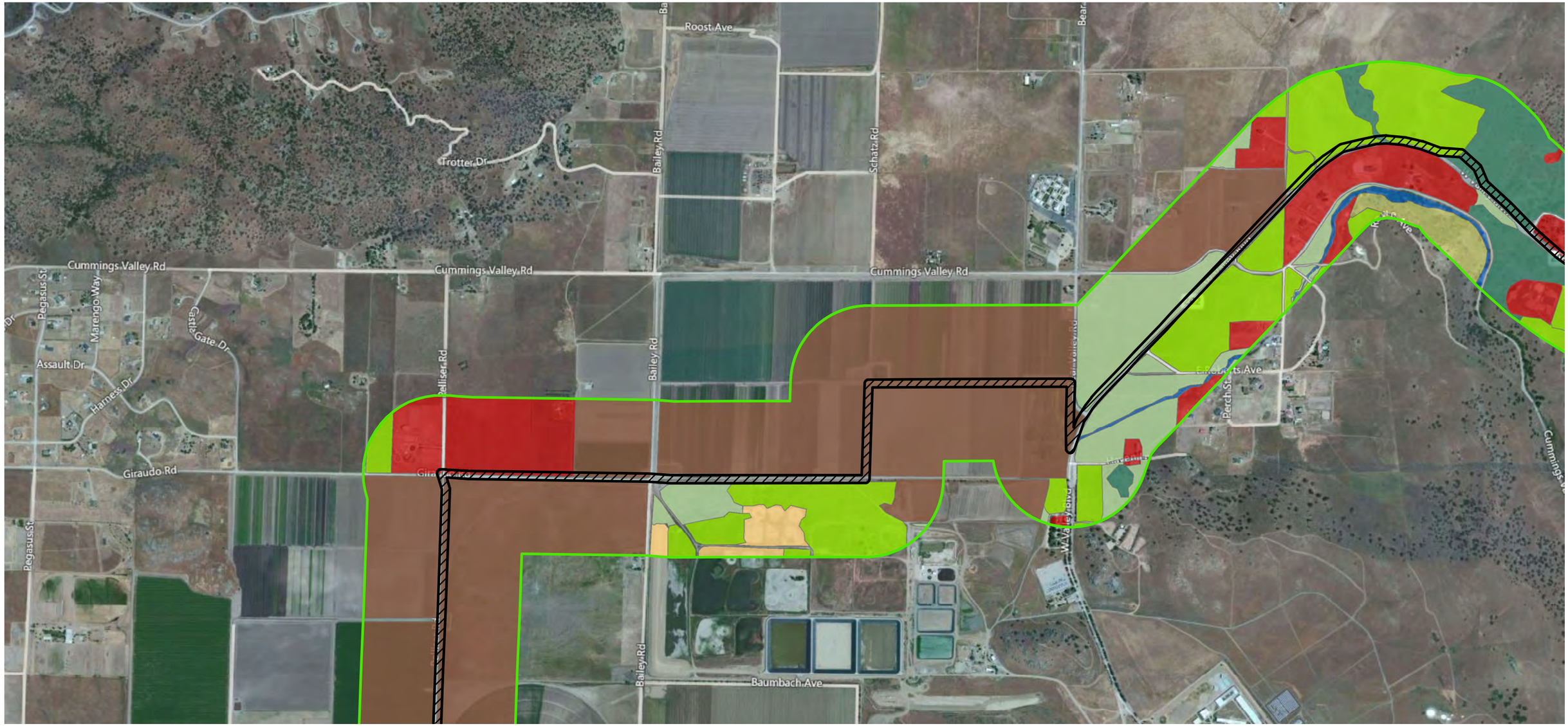
Legend

- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes

0 3 6 12 18 24 Miles

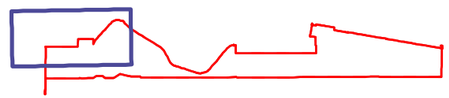
Figure 4.4-4.b Vegetation



Legend

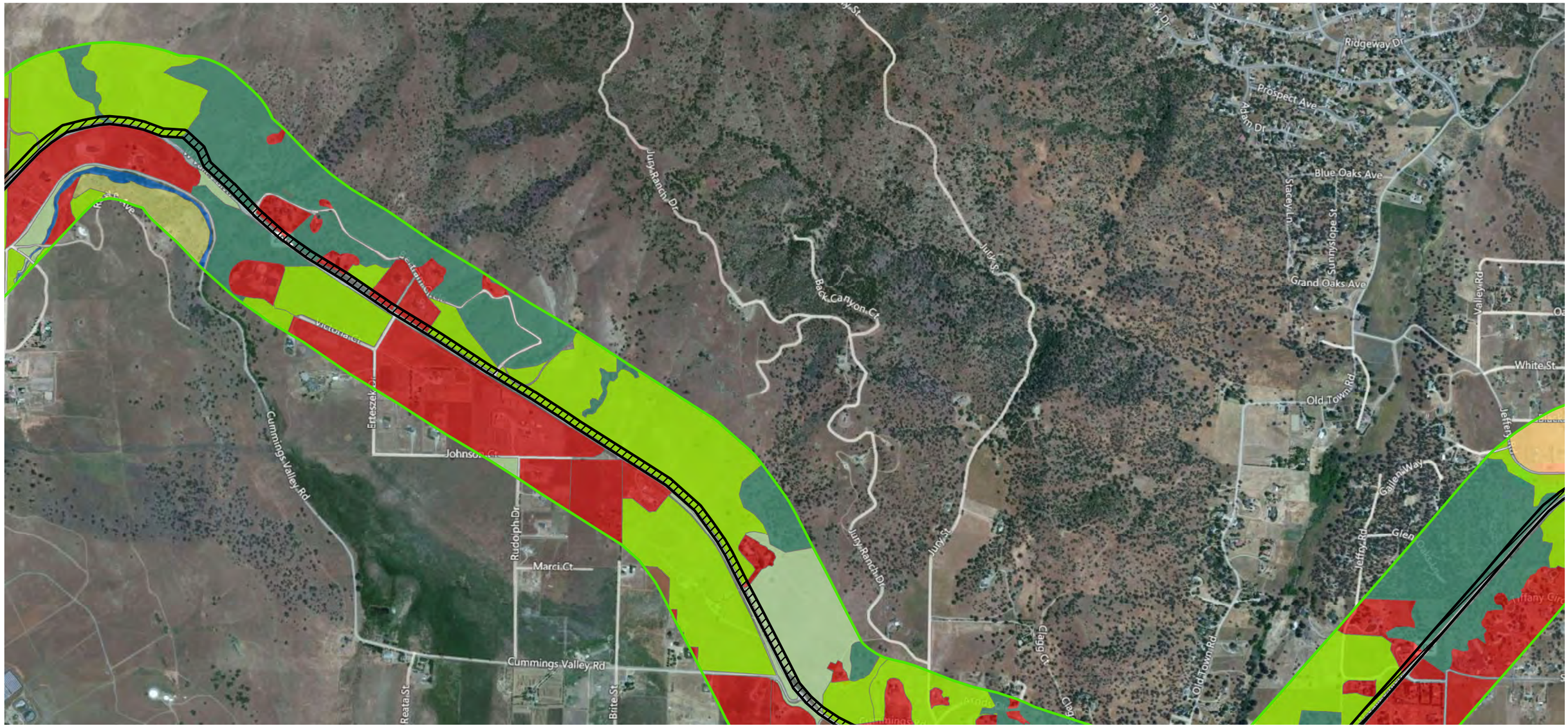
- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes



0 3 6 12 18 24 Miles

Figure 4.4-4.c Vegetation



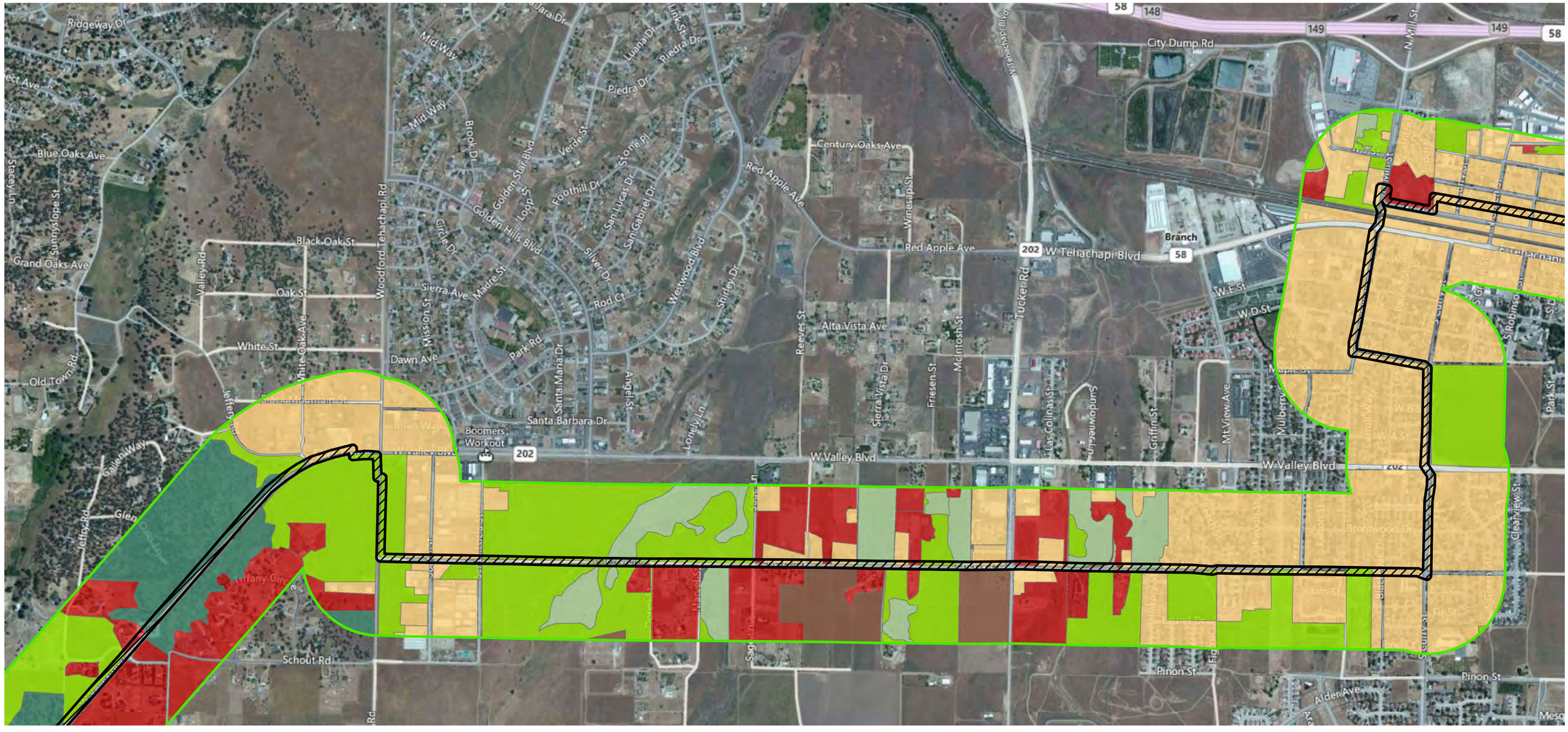
Legend

- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes

0 3 6 12 18 24 Miles

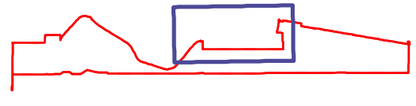
Figure 4.4-4.d Vegetation



Legend

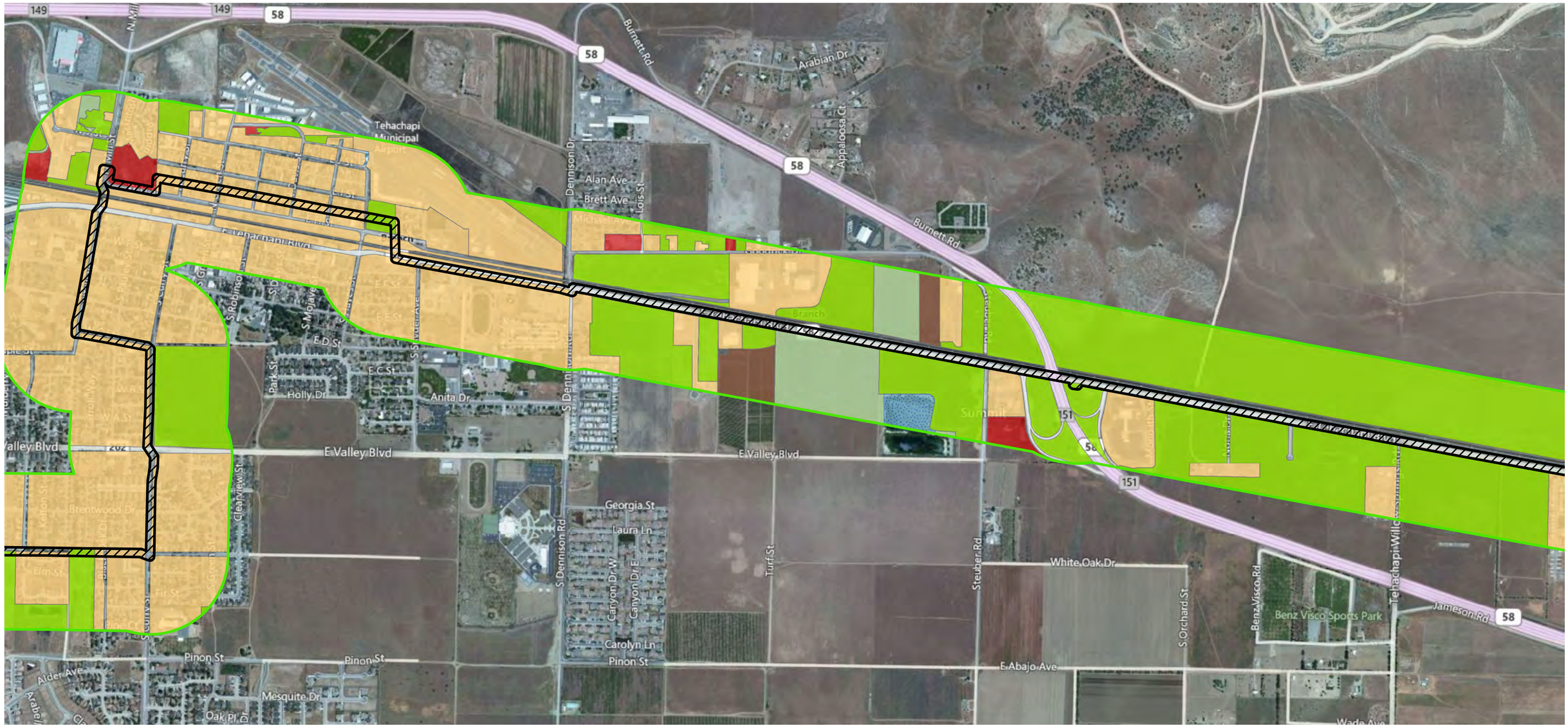
- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes



0 3 6 12 18 24 Miles

Figure 4.4-4.e Vegetation



Legend

- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes

0 3 6 12 18 24 Miles

Figure 4.4-4.f Vegetation

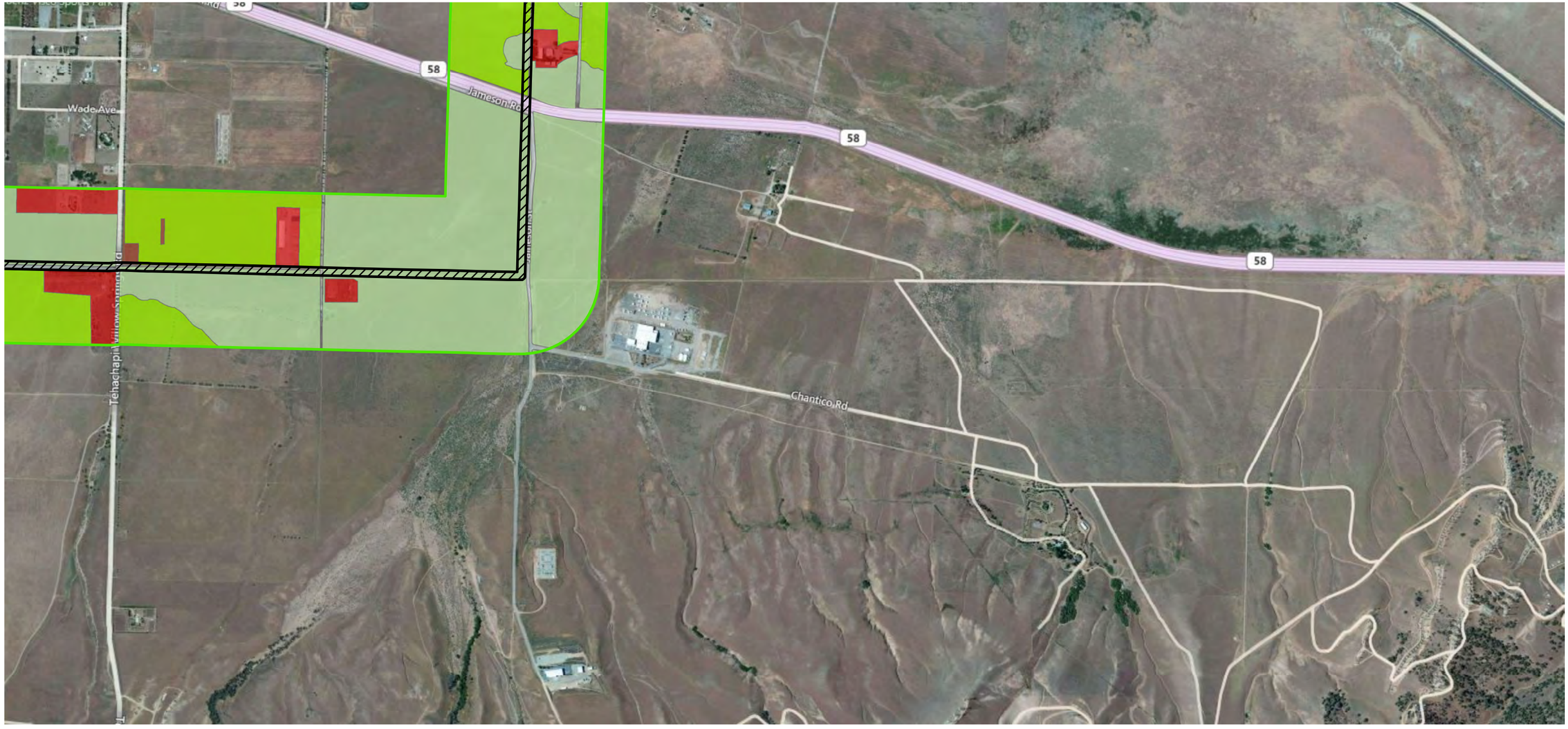
Legend

- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes

0 3 6 12 18 24 Miles

Figure 4.4-4.g Vegetation



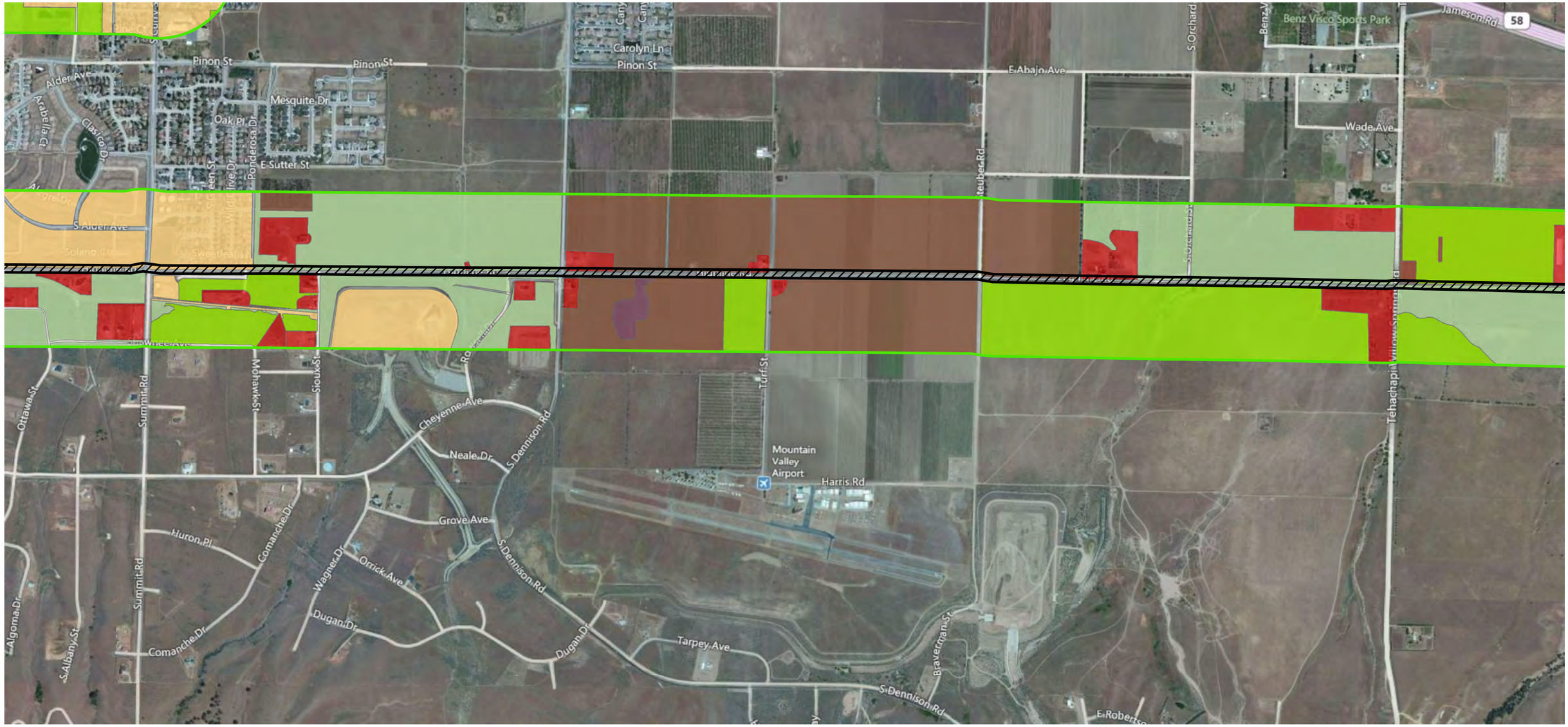
Legend

- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes

0 3 6 12 18 24 Miles

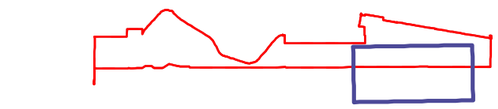
Figure 4.4-4.h Vegetation



Legend

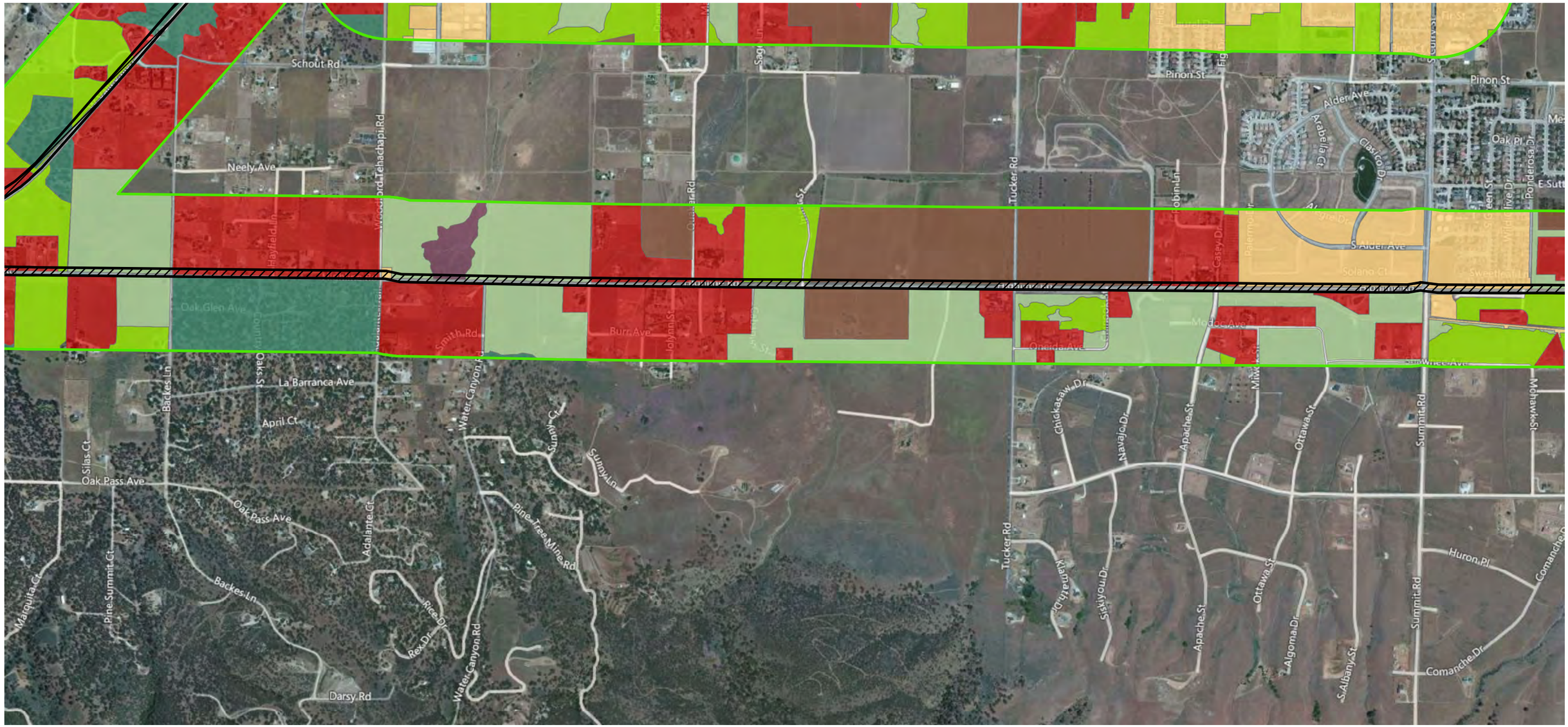
- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes



0 3 6 12 18 24 Miles

Figure 4.4-4.i Vegetation



Legend

- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes

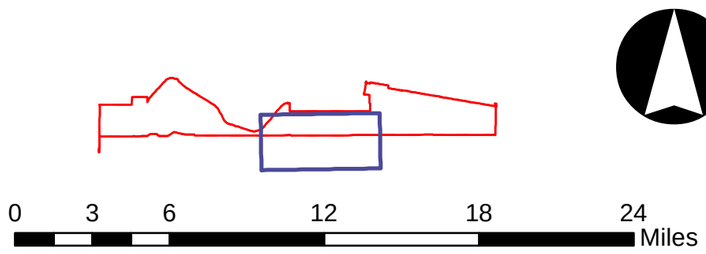
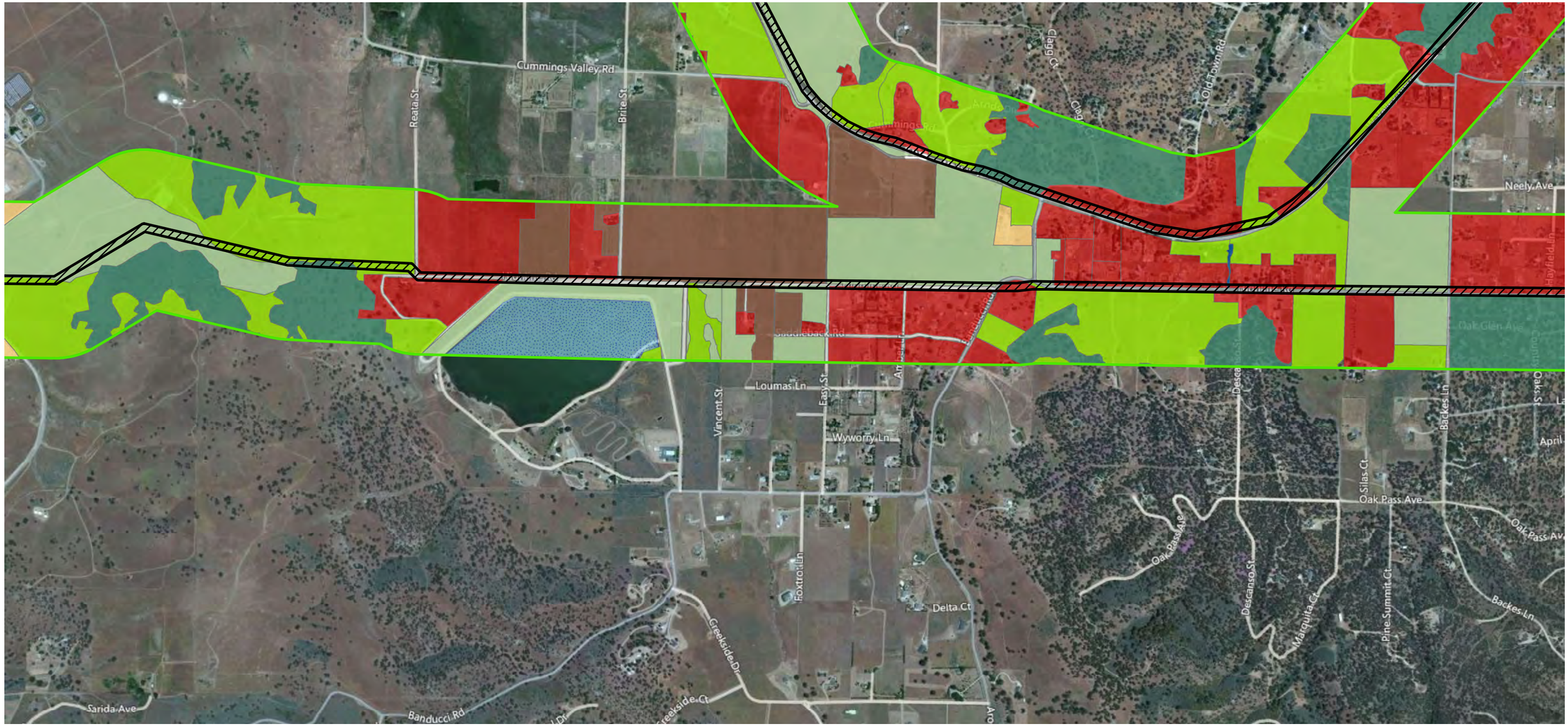


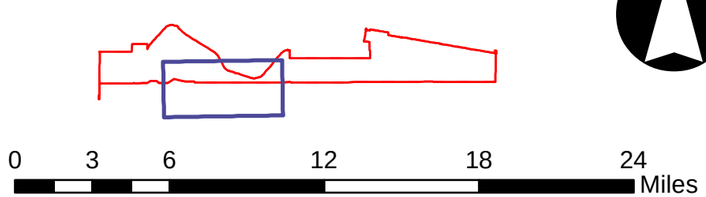
Figure 4.4-4.j Vegetation



Legend

- Vegetation Mapping Limits
- Focused Survey Area/Area of Potential Effect*
- Open Water
- Grassland
- Blue Oak Woodland
- Agriculture
- Developed
- Rubber Rabbitbrush
- Rural
- Great Basin Sagebrush
- Foothill Pine-Oak Woodland
- Riparian

* Includes Substations and 50' Buffer on Subtransmission and Telecommunications Routes



Blue Oak Woodland occurs along the Proposed Telecommunications Route 2 from the Tehachapi city limits west to Cummings Valley along Valley Boulevard and Highline Road, and along the proposed Telecommunications Route 1 within the California Correctional Institution. Native species of oaks within this habitat may be protected under the County's oak tree conservation ordinance. No such habitat occurs within near or within the proposed Banducci Substation.

Foothill Pine-Oak Woodland

Foothill Pine-Oak Woodlands are dominated by foothill pine and blue oak (Holland, 1986). These woodlands have a diverse mix of hardwoods, conifers, and shrubs, and widely variable overstories. Blue oak is usually the more abundant species, although foothill pine is taller. Other plant species that commonly occur within this habitat include California buckeye (*Aesculus californica*), coast live oak, black oak (*Quercus kelloggii*), toyon (*Heteromeles arbutifolia*), and coffeeberry (*Rhamnus californica*). Foothill Pine-Oak Woodlands occur in well-drained, rocky or exposed sites along ridges or canyons with poor or shallow soils usually below 6,000 feet (Holland, 1986). Native species of oaks within this habitat may be protected under the County's oak tree conservation ordinance.

The distribution of this community within the Proposed Project Study Area is restricted to the south-central portion of the alignment of Proposed Telecommunications Route 1.

Big Sagebrush Scrub

Great Basin Sagebrush (*Artemisia tridenta*) is a gray-leaved soft woody shrub that grows up to 5 feet tall, but is typically closer to 3 feet in height. It can occur in a variety of conditions, but often occurs in fine-textured soils with a high water table (Holland, 1986). Under certain conditions it grows as a dominant shrub that comprises Big Sagebrush Scrub. Distributed widely along the eastern Sierra Nevada Mountain Range, this vegetation type also occurs in scattered localities along the margins of the Mojave and Sonoran Deserts at elevations between 4,000 and 9,000 feet. Other plant species that commonly occur within this vegetation type include cheatgrass (*Bromus tectorum*), rubber rabbitbrush (*Chrysothamnus nauseosus*), California juniper (*Juniperus californicus*), singleleaf pinyon (*Pinus monophylla*), Sandberg's bluegrass (*Poa secunda*), common sandaster (*Lessingia filaginifolia*), and antelope bush (*Purshia tridentata* var. *glandulosa*). This community is considered a rare habitat by the CNDDB (CDFG, 2003).

This community has a very narrow distribution in the westernmost portion of the Proposed Project Study Area between Proposed Telecommunications Routes 1 and 2.

Rubber Rabbitbrush

Rabbitbrush scrub is a vegetation type that is generally less than 3 feet tall and is dominated by rubber rabbitbrush. It is typically associated with areas subject to frequent disturbance. Rubber rabbitbrush occurs in large relatively open fields with fine-textured soils with a high water table.

Within the Proposed Project Study Area, the Rubber Rabbitbrush community is common in fallow agricultural fields and pasture lands, such as those found near Monolith and Cummings Valley. This community occurs in various places within Proposed Telecommunications Routes 1 and 2.

(*Nonnative*) *Grassland*

Nonnative grassland is also referred to as California annual grassland. It consists of a dense to sparse cover of annual grasses and forbs between 0.5 to 1.5 feet tall. In years with sufficient rainfall, this habitat is often associated with species of showy annual wildflowers. Germination occurs at the start of the late fall rains and growth, flowering, and seed-set occur from winter through spring. Senescence occurs in early summer. This habitat occurs on fine-textured, usually clay, soils that are moist or water-logged in the winter and very dry during the summer. It is usually found below 3,000 feet but reaches 4,000 feet in the Tehachapi Mountains. The dominant species are variable in this community, but it is locally composed of nonnative grass and forb species, such as red brome (*Bromus madritensis* ssp. *rubens*), cheatgrass (*Bromus tectorum*), slender wild oats (*Avena barbata*), short-pod mustard (*Hirschfeldia incana*), and yellow starthistle (*Centaurea solstitialis*), and native species such as six weeks fescue (*Vulpia octoflora*), California poppy (*Eschscholtzia californica*), common sandaster, doveweed (*Croton* [=*Eremocarpus*] *setigerus*), and purple needlegrass (*Nassella pulchra*).

This community is widely distributed throughout the Proposed Project Study Area.

Agricultural and Rural Lands

Agricultural and Rural Land is defined here as land used for the production of food and fiber, the feeding and maintenance of livestock, and housing in very low density. The interface between this and other vegetation types may be a transition zone between natural and seminatural areas and can be characterized more or less as open space. Such areas may support agricultural crops, such as alfalfa (*Medicago sativa*) or barley (*Hordeum vulgare*), Nonnative Grassland, or ornamental trees and plants, but are also often characterized by the presence of ruderal plants, such as telegraph weed (*Heterotheca grandiflora*) or annual sunflower (*Helianthus annuus*). Locally, these areas also occasionally support native communities such as oak woodlands or native grasses such as purple needlegrass.

Within the Proposed Project Study Area, Agricultural and Rural land is most common near the existing Monolith Substation and in Brite and Cummings Valleys. It is the dominant vegetation found on the proposed Banducci Substation site.

Developed

Developed lands include urban areas that have been largely built upon and that are generally absent of native vegetation. Urban areas may still include vacant lots with Nonnative Grassland and ruderal vegetation similar to that of Agricultural and Rural Lands, but often also supports a greater number of ornamental plants commonly used for landscaping.

This land use is prevalent in the City of Tehachapi and immediately surrounding areas in the eastern half of the Proposed Project Study Area.

Riparian

Riparian areas include the emergent vegetation found on perennial and ephemeral riverine water courses. Riparian vegetation is absent from the Focused Survey Area/Area of Potential Effect but occurs along water courses, such as Brite Creek, which cross the Proposed Telecommunication Routes near west of Tehachapi. Vegetation associated with mapped Riparian areas includes trees such as willows (*Salix* spp.), Fremont cottonwood (*Populus fremontii*), and western sycamore (*Platanus racemosa*). Other emergent species such as Baltic rush (*Juncus balticus*), sedges (*Carex* spp.), and nutgrass (*Cyperus* spp.), common cattail (*Typha latifolia*) and bulrush (*Scirpus* spp.) may also occur.

Open Water

Open water refers to all areas that support perennial or near perennial water. Such areas typically lack vegetation due to a lack of light penetration. Floating plants such as duckweed (*Lemna* spp.), water buttercup (*Ranunculus aquatilis*), and mosquito fern (*Azolla filiculoides*) can occur under certain conditions. This mapped type includes inland depressions, ponds, lakes, reservoirs, and stream channels containing standing water, such as the reservoirs along the south- and north-central portions of the Proposed Telecommunications Routes.

Common Wildlife

Three reptile species were observed within the Proposed Project Study Area. The most common of these was side-blotched lizard (*Uta stansburiana*), an abundant species throughout southern California. Western whiptail (*Cnemidophorus tigris*) and gopher snake (*Pituophis melanoleuca*) were also observed, but far less frequently.

Common birds observed during the survey included resident and wintering species. Among the common resident species in open areas were red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco spaerverius*), common raven (*Corvus corax*), horned lark (*Eremophila alpestris*), and western meadowlark (*Sturnella neglecta*). Western scrub jay (*Aphelocoma californica*), oak titmouse (*Baeolophus inornatus*), California towhee (*Melozone crissalis*), California quail (*Callipepla californica*), and northern mockingbird (*Mimos polyglottos*) are among the common resident scrub and woodland bird species. Wintering bird species included white-crowned sparrow (*Zonotrichia leucophrys*) and yellow-rumped warbler (*Dendroica coronata*). Migratory and nesting species detected included Vaux's swift (*Chaetura vauxi*), Say's phoebe (*Sayornis saya*), and lark sparrow (*Condestes grammacus*).

Sign (burrows, dens, tracks, or scat) of several mammal species was detected. This included natal dens and scat for coyote (*Canis latrans*), scat and tracks for black-tailed jackrabbit (*Lepus californicus*) and Audubon's cottontail (*Sylvilagus auduboni*), and tail drag and burrows for a number of small mice. Other mammals detected by sign or direct observation included mule deer (*Odocoileus hemionus*), Botta's pocket gopher (*Thomomys bottae*), Beechey ground squirrel (*Spermophilus beecheyi*), striped skunk (*Mephitis mephitis*), American badger (*Taxidea taxus*), and bobcat (*Felis rufus*). Two individual pronghorn antelope (*Antilocapra americana*), members of a locally reintroduced experimental herd, were observed south of the Monolith Substation near Tehachapi –Willow Springs Road.

Wildlife Movement

Broad continuous expanses of vegetation facilitate free dispersal of species between local areas and at larger scales between regions. Natural processes, such as wildlife movement and plant dispersal, have formed and dynamically reshaped global floras and faunas for as long as species have been able to disperse. Certain species extinctions have been the result of geographic and other forms of isolation. Prior to accelerated human population growth and expansion these processes generally happened over millennia or longer. In many instances population shifts, isolation, and extinction resulted in speciation (evolution of new species).

Expanding human populations into previously undisturbed areas are fragmenting continuous expanses of vegetation and associated habitat at increasing rates. Habitat fragmentation is widely regarded as a major threat to wildlife population viability and plant community integrity (Rolstad, 1991; Wiens, 1995). Isolated populations are then more vulnerable to local extinction as a result of stochastic events and gene flow problems, such as bottlenecks and inbreeding depression. These effects are often dramatic in urbanized and urbanizing areas, prompting conservation biologists to develop strategies for maintaining habitat connectivity to allow free movement of populations between otherwise isolated habitat patches.

The Proposed Project site is located within a land use matrix of urban, agricultural, and residential areas. Adjacent open space, agricultural, and low-density development is prevalent on the western half of the Proposed Project site. Although no specific wildlife corridors have been mapped in the immediate vicinity of the Proposed Project, natural open space and low density development in the survey area is contiguous, with off-site habitats to the north and south. Open space contiguous with the Proposed Project provides opportunities for movement of mammals with large home ranges, such as mule deer, bobcat, mountain lion and pronghorn antelope. Moreover, the Tehachapi Mountains are recognized as an important wildlife connectivity area that links the Sierra Nevadas to the north and the Sierra Madres to the south (Beier *et al*, 2006; Penrod *et al*, 2006; and Block *et al*, 1992).

Special-Status Biological Resources

The CNDDB lists and depicts the locations of sensitive resources in and near the Proposed Project Study Area. These resources are shown in Figure 4.4-5: CNDDB Occurrences and are discussed in detail below.

Special-Status Vegetation Types

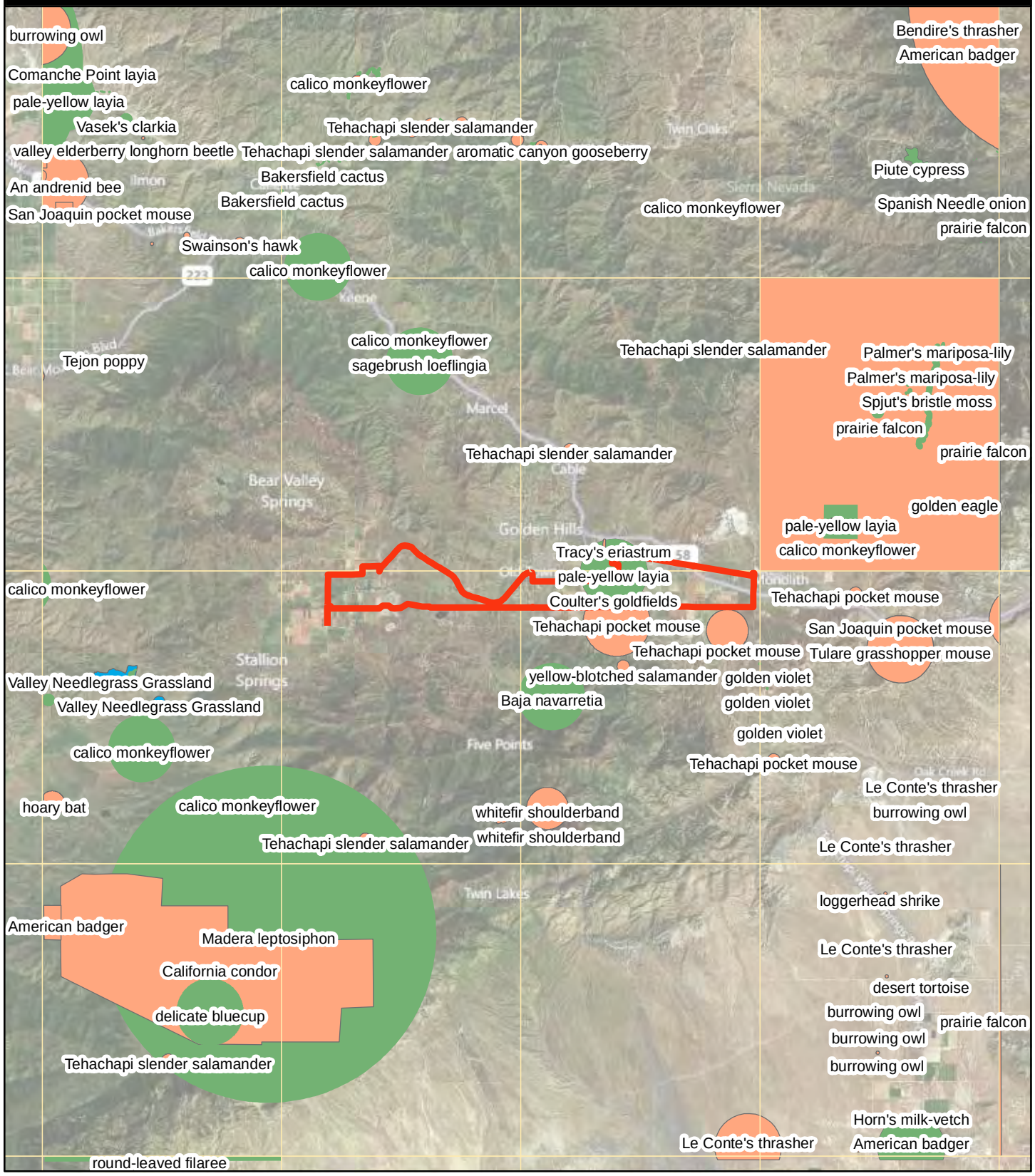
Special-Status Vegetation Types are plant associations sometimes afforded special legislative protection. Such vegetation types are normally considered of management priority because of their rarity or imperilment, the sensitivity of the species that they support, or because these areas serve multiple functions as is often the case with wetlands. Special-Status Vegetation Types are normally rare plant communities but can also refer to a number of environments, such as tidal areas, dunes, or pebble plains. Small patches of willow riparian vegetation near, but downstream of the Proposed Project alignment would likely be considered special-status vegetation. The conditions that support this vegetation are discussed further in the following section.

Jurisdictional Areas

The Proposed Telecommunications Routes 1 and 2 cross several drainage features, including Brite Creek and several unnamed blue line streams. Brite Creek connects to Tehachapi Creek, which is considered waters of the United States under the Federal Clean Water Act (CWA). The Federal CWA limits federal jurisdiction to "navigable waters," which it defines as "waters of the United States." Waters of the United States are further subdivided into seven categories, two of which are wetlands and adjacent wetlands (33 CFR §§ 328.3[a] and [a][7]). In places, Brite Creek supports facultative hydrophytes (plants that normally grow in water) that may indicate the presence of jurisdictional wetlands subject to the CWA and the specific rules that apply to wetlands. Wetlands are defined under 33 CFR Part 328.3 (b) as "[T]hose areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, prevalence of vegetation typically adapted for life in saturated soil conditions."

The U.S. Army Corps of Engineers (USACE) is charged, in cooperation with the U.S. Environmental Protection Agency (EPA), with the responsibility for issuing permits under Section 404 of the CWA. Section 404 of the CWA imposes restrictions on and requires permits for any action that involves the placement of fill material, dredges material from, or results in

Figure 4.4-5 CNDDB Occurrences



Legend

- Proposed Project Alignment
- USGS 7.5-Minute Quadrangles
- Plants
- Animals
- Habitats

0 1.5 3 6 9 12 Miles

flooding of wetlands or other waters of the United States. In accordance with U.S. EPA regulations issued under Section 404(b)(1), the permitting of fill will not be approved unless the following conditions are met: no practicable, less environmentally damaging alternative to the action exists; the activity does not cause or contribute to violations of state water quality standards (as described under Section 401 of the CWA); the activity does not jeopardize federally listed threatened or endangered species or sensitive cultural resources (as required by 33 CFR Part 320.3e and g); the activity does not contribute to significant degradation of waters of the United States; and all practicable and appropriate steps have been taken to minimize potential adverse impacts to the aquatic ecosystem (40 CFR Part 230.10).

The Federal CWA and California's Porter-Cologne Water Quality Control Act (Porter-Cologne Act) regulate discharge of surface water by the Proposed Project. These laws establish the Regional Water Quality Control Board (RWQCB) as the responsible agency for protecting water quality within California. The RWQCB's jurisdiction extends to all "Waters of the State" and to all "Waters of the U.S.," including wetlands (isolated and nonisolated). Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed federally permitted activity that may affect water quality. Section 401 permitting from RWQCB is required to obtain Section 404 permits under the CWA from the USACE.

Intermittent drainages are also afforded protection as streambeds subject to the limitations of California Fish and Game Code Sections 1600 et seq. Under the Fish and Game code, the CDFG is authorized to recommend mitigation for projects that obstruct the flow or that otherwise result in the alteration of the bed, channel, or bank of a stream or river possessing fish and wildlife resources. The law extends the CDFG's jurisdiction to permanent, ephemeral (nonpermanent), and intermittent streams. Applicants whose projects are likely to affect these resources are required to enter into a Streambed Alteration Agreement with the CDFG.

Special-Status Plants and Wildlife

Special-status plants and wildlife are species afforded special protection or management by federal, state, or local resource agencies or organizations. Listed and special-status species are of limited distribution and may require specialized habitat or other conditions. Special-status species are defined as meeting one or more of the following criteria:

- Listed or proposed for listing under the California or Federal Endangered Species Acts
- Protected under other regulations such as the Migratory Bird Treaty Act
- California Species of Concern as identified on the State's Special Animal and Special Plants lists
- Listed as species of concern by CNPS, Bureau of Land Management (BLM), or U.S. Fish and Wildlife Service (USFWS)

Special-status species considered for this analysis are based on queries of the CNDDB, USFWS, and CNPS species lists for USGS 7.5-minute topographic quadrangles containing the project alignment as well as the other quadrangles that surround them. Other species likely to occur were included based on investigator familiarity with Tehachapi and surrounding areas.

Special-Status Plants

No special-status plants were detected during biological surveys conducted in 2010 and 2011 (Plegadis, 2011). Special-status plants that may occur in the Proposed Project Study Area are listed in Appendix D, along with habitat suitability and the potential for occurrence within the Proposed Project. Of 25 special-status plants listed in the CNDDB, 12 have overlapping ranges with and suitable habitat within the Proposed Project Study Area:

- Baja navarettia (*Navarettia peninsularis*)
- Big Bear Valley woollypod (*Astragalus leucolobus*)
- Calico monkeyflower (*Mimulus pictus*)
- Comanche Point layia (*Layia leucopappa*)
- Delicate bluecup (*Githopsis tenella*)
- Madera leptosiphon (*Leptosiphon serrulatus*)
- Pale-yellow heterotheca (*Layia heterotheca*)
- Palmer's Mariposa-lily (*Calochortus palmeri* var. *palmeri*)
- Round-leaved filaree (*California macrophylla*)
- Spanish needle onion (*Allium shevockii*)
- Tehachapi monardella (*Monardella linioides* ssp. *oblonga*)
- Tracy's eriastrum (*Eriastrum tracyi*)

Special-Status Wildlife

Three special-status wildlife species, Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), and prairie falcon (*Falco mexicanus*), were detected during biological surveys conducted in 2011 (Plegadis, 2011). Other special-status wildlife species may occur in the Proposed Project vicinity, including the State-listed threatened Tehachapi slender salamander (*Batrachoseps stebinsi*). Other species that may occur include the following:

- American badger (*Taxidea taxus*)
- Burrowing owl (*Athene cunicularia*)
- California condor (*Gymnogyps californianus*)
- California horned lark (*Eremophila alpestris actia*)
- Coast horned lizard (*Phrynosoma coronatum*)
- Golden eagle (*Aquila chrysaetos*)
- Hoary bat (*Lasiurus cinereus*)
- Merlin (*Falco columbarius*)
- Mountain plover (*Charadrius montanus*)
- Northern harrier (*Circus cyaneus*)
- Swainson's hawk (*Buteo swainsoni*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Tricolored blackbird (*Agelaius tricolor*)
- White-tailed kite (*Elanus leucurus*)
- Yellow warbler (*Dendroica petechia brewsteri*)
- Yellow-blotched salamander (*Ensatina eschscholtzii croceator*)

Appendix D lists these species and provides information on habitat suitability and the potential for occurrence within the Proposed Project.

Critical Habitat

The closest designated critical habitat is for California condor and is located west of the Proposed Project Study Area; no designated critical habitat overlaps the Proposed Project site.

4.4.4 Regulatory Setting

Federal

Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect endangered species and species threatened with extinction (federally listed species). FESA operates in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

Section 9 of the FESA prohibits the "take" of endangered or threatened wildlife species. The legal definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" (§ 1532 [19]). Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns (50 CFR §17.3). Harassment is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns (50 CFR §17.3). Actions that result in take can result in civil or criminal penalties.

FESA authorizes the USFWS to issue permits under Sections 7 and 10 of that Act. Section 7 mandates that all federal agencies consult with the USFWS for terrestrial species and/or National Marine Fisheries Service (NMFS) for marine species to ensure that federal agency actions do not jeopardize the continued existence of a listed species or adversely modify critical habitat for listed species. Any anticipated adverse effects require preparation of a biological assessment to determine potential effects of the project on listed species and critical habitat. If the project adversely affects a listed species or its habitat, the USFWS or NMFS prepares a Biological Opinion (BO). The BO may recommend "reasonable and prudent alternatives" to the project to avoid jeopardizing or adversely modifying habitat including "take" limits.

The FESA defines critical habitat as habitat deemed essential to the survival of a federally species. The FESA requires the federal government to designate "critical habitat" for any species it lists under the FESA. Under Section 7, all federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its designated critical habitat. These complementary requirements apply only to federal agency actions, and the latter only to habitat that has been designated. A critical habitat designation does not set up a preserve or refuge, and applies only when federal funding, permits, or projects are involved. Critical habitat requirements do not apply to activities on private land that does not involve a federal agency.

Nonfederal projects may still pursue Section 7 permitting when a federal nexus, such as federal funding or permitting (i.e. through the USACE under Section 404 of the Federal CWA), is available. When no nexus is available, Section 10(a)(1)(B) authorizes issuance of permits to allow "incidental take" of listed species. "Incidental take" is defined by the FESA as take that is incidental to, and not for the purpose of, carrying out an otherwise lawful activity. To obtain an incidental take permit, an applicant must submit a Habitat Conservation Plan outlining steps to minimize and mitigate permitted take impacts to listed species.

Clean Water Act

The Federal CWA provides guidance for the restoration and maintenance of the chemical, physical and biological integrity of the nation's waters.

The USACE and the U.S. EPA regulate discharge of dredged or fill material into navigable waters of the United States under Section 404 of the CWA. The general definition of navigable waters of the U.S. includes those waters of the U.S. that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or are presently used or have been used in the past, or may be susceptible to use to transport interstate or foreign commerce. "Discharges of fill material" are defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)]. Additionally, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with applicable effluent limitations and water quality standards.

Section 401 of the CWA requires the issuance of a water quality certification thereof for all Section 404 nationwide or individual permits issued by the USACE. The EPA has deferred water quality certification authority to the State Water Resources Control Board. Most projects are regulated by RWQCBs. The State Water Resources Control Board directly regulates multiregional projects and supports and coordinates the program statewide.

Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act (MBTA), first enacted in 1918, prohibits any person, unless permitted by regulations, to:

> …pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatsoever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention … for the protection of migratory birds ... or any part, nest, or egg of any such bird. (16 U.S.C. 703)

The list of migratory birds includes nearly all bird species native to the United States. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all nonnative species. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. Thus, it is illegal under MBTA to directly kill, or destroy a nest of, nearly any native bird species, not just endangered species. Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA. Removal of unoccupied nests, or bird mortality resulting indirectly from disturbance activities, is not considered a violation of the MBTA.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940, and amended several times since then, prohibits anyone without a permit issued by the Secretary of the Interior from "taking" bald eagles (*Haliaeetus leucocephalus*), including their parts, nests, or eggs. In 1962, Congress amended the act to cover golden eagles (*Aquila chrysaetos*).

The Bald and Golden Eagle Protection Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." "Take" is defined as an act to "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb."

On November 10, 2009, the US Fish and Wildlife Service (USFWS) implemented new rules under the existing Bald and Golden Eagle Act, requiring all activities that may disturb or incidentally take an eagle or its nest as a result of an otherwise legal activity to be permitted by the USFWS.

State

California Endangered Species Act

The CDFG administers the California Endangered Species Act (CESA) (CFG Code Sections 2050 *et seq.*). CESA prohibits the "taking" of listed species except as otherwise provided in State law. Section 86 of CFG Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Under certain circumstances, CESA applies these take prohibitions to species petitioned for listing (state candidates). Pursuant to the requirements of CESA, State lead agencies (as defined under CEQA Public Resources Code Section 21067) are required to consult with CDFG to ensure that any action or project is not likely to jeopardize the continued existence of any endangered or threatened species or result in destruction or adverse modification of essential habitat. Additionally, the CDFG encourages informal consultation on any proposed project that may impact a candidate species. CESA requires the CDFG to maintain a list of threatened and endangered species. The CDFG also maintains a list of candidates for listing under CESA and of species of special concern (or watch list species).

California Fish and Game Code (*Sections1600-1616*)

CDFG is a trustee agency that has jurisdiction under Section 1600 *et seq*. of the California Fish and Game Code. Under Section 1602, a private party must notify CDFG if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds - except when the department has been notified pursuant to Section 1601." Under this code, the CDFG not only regulates activities that would alter the flow, bed and banks, channel of a river, stream or a lake, but also activities that may affect associated riparian areas of these resources—all considered waters of the State.

Title 14, California Code of Regulations, Sections 670.2 and 670.5

California Code of Regulations, Sections 670.2 and 670.5 list animals designated as endangered or threatened in California, California Species of Special Concern due to declining populations and habitat, and candidate species for future state listing as California Species of Special Concern.

Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

The Kern County General Plan (Kern County, 2009a) identifies the federal, State, and local statutes, ordinances, or policies that govern the conservation of biological resources that must be considered by Kern County during the decision-making process for any project that could affect biological resources.

The Land Use, Open Space, and Conservation Element of the Kern County General Plan provides for a variety of land uses to ensure future economic growth while also ensuring the conservation of the county's agricultural and natural resources. Section 1.10: General Provisions provides goals, policies, and implementation measures that typically apply to discretionary projects.

1.10.10 Oak Tree Conservation

Policy 65. Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.

Policy 66. Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

Kern County Energy Element of the General Plan

The Kern County General Plan provides the policy under the Energy Element of the General Plan (Chapter 5) that encourages new transmission lines to be sited/configured to avoid or minimize collision and electrocution hazards to raptors.

Desert Renewable Energy Conservation Plan (DRECP)

Executive Order S-14-08 established a target of obtaining 33 percent of the State's electricity from renewable resources by 2020. In response to this Order, the California Energy Commission (CEC), CDFG, Bureau of Land Management (BLM), and the USFWS have started preparing the Desert Renewable Energy Conservation Plan (DRECP). The plan area encompasses the Mojave and Colorado Desert regions in California, including all or a portion of Kern and Los Angeles Counties.

The DRECP is a proposed State Natural Community Conservation Plan (NCCP) intended to provide for effective protection and conservation of desert ecosystems while allowing for appropriate development of renewable energy projects. The plan proponents anticipate that it will provide long-term endangered species permit assurances to renewable energy developers and provide a process for conservation funding to implement the DRECP. It will also serve as the basis for one or more of the HCPs under the FESA. Estimated DRECP approval and adoption is in late 2013.

4.4.3 Significance Criteria

CEQA was adopted in 1970 and applies to actions directly undertaken, financed or permitted by Sate lead agencies. CEQA requires that agencies inform themselves about the environmental effects of their proposed actions, consider all relevant information, provide the public an opportunity to comment on the environmental issues, and avoid or reduce potential environmental harm whenever feasible.

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to result in impact to the following questions. Would the Proposed 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by California Department of Fish and Game or U.S. Fish and Wildlife Service?

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?
- 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?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?

An evaluation of whether or not an impact to biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would diminish, or result in the loss of, an important biological resource, or those that would obviously conflict with local, state, or federal resource conservation plans, goals, or regulations. Impacts are sometimes locally important but not significant according to CEQA. This is necessary because, although the impacts would result in an adverse alteration of existing conditions, they would not substantially diminish, or result in the permanent loss of, an important resource on a population-wide or region-wide basis.

Section 15380 of the CEQA Guidelines indicates that a lead agency can consider a nonlisted species to be rare or endangered for the purposes of CEQA if the species can be shown to meet the criteria in the definition of rare or endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special-status species was considered according to the definitions for “rare” and “endangered” listed in Section 15380 of the CEQA Guidelines.

4.4.4 Impact Analysis

This section presents a general biological resources impact analysis as the Proposed Project is still in the design stage.

The Proposed Project could result in two types of impacts: direct and indirect. Direct impacts may be short-term or long-term alterations or losses during the course of project implementation and operation. Examples of activities that result in direct impacts include grading, vegetation brushing, filling drainages, driving over existing vegetation and other actions that result in habitat loss. Direct impacts are likely to occur within the expected grading limits of permanent sites and temporary access areas (pulling stations etc.). Indirect impacts occur when project-related activities affect biological resources in a manner other than a direct loss of the resource. Noise, lighting, erosion, siltation, substantial reduction in water quality, dust, and increased human activity in or directly adjacent to sensitive habitat areas are examples of potential indirect impacts.

The biological resources impact analysis evaluates possible effects to:

- Federally- and state-listed species
- Non-listed species that meet the criteria in the definition of Rare or Endangered in the CEQA guidelines
- Streambeds, wetlands, and associated vegetation
- Suitable habitat for federally or state-listed plant or wildlife species
- California Species of Concern
- Habitat, other than wetlands, considered special status by regulatory agencies (USFWS, CDFG) or resource conservation organizations
- Other species or issues of concern to regulatory agencies or conservation organizations (e.g., CNPS)

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 CDFG or USFWS?

Construction Impacts

Proposed Banducci Substation Site

Less Than Significant Impact. Construction of the proposed Banducci Substation would not have a substantial adverse effect either directly or through habitat modifications on any special-status plant species. The proposed Banducci Substation site would be located on agricultural land that does not support suitable site conditions or soils for any such species. Therefore, construction and operation of the proposed Banducci Substation site would not impact special-status plant species.

The proposed Banducci Substation site includes agricultural land that contains suitable foraging habitat (but not suitable nesting habitat) for ferruginous hawk, prairie falcon, golden eagle, Swainson's hawk, mountain plover, northern harrier, white-tailed kite, Merlin, California condor, and American badger. Construction of the substation is expected to result in the permanent loss of 6.3 acres of foraging habitat. As this habitat loss is relatively minor (or 0.05 percent) of the over 13,000 acres of potential habitat for these species in the region, and no impacts to nesting habitat would be expected to occur, impacts to these species would be considered adverse but less than significant.

As discussed in Appendix D, surveys for burrowing owl conducted in 2010 and 2011 did not produce evidence of burrowing owl on or near the proposed Banducci Substation site. Although some suitable habitat for this species occurs on the site, and this species may occur occasionally as a migrant or winter visitor, the site is subject to frequent farming activities that preclude the presence of the species at some locations. Any impacts to burrowing owls would be reduced to less than significant levels through the implementation of Application Proposed Measures (APMs) BIO-1 and BIO-3.

Proposed Subtransmission Lines

Less Than Significant Impact. The proposed new 66 kV subtransmission line poles on Pelliser Road south of Dale Road and pole replacements on Highline Road would be constructed on agricultural land and nonnative grassland. Therefore, construction and operation of the Proposed 66 kV Subtransmission Line would not impact special-status plant species.

The Proposed 66 kV Subtransmission Line route includes agricultural land that contains suitable foraging habitat (but not suitable nesting habitat) for ferruginous hawk, prairie falcon, golden eagle, Swainson's hawk, mountain plover, northern harrier, white-tailed kite, Merlin, California condor, and American badger. Construction of the subtransmission line segments is expected to

result in the temporary loss of 6.5 acres of foraging habitat.[1] As the expected 6.5-acre habitat impact area is only approximately 0.05 percent of the 13,000-acre area of potential habitat for these species in the region, and no impacts to nesting habitat would be expected to occur, impacts to these species would be considered adverse but less than significant.

Surveys for burrowing owl in 2010 and 2011 did not produce evidence of burrowing owl on or near the Proposed 66 kV Subtransmission Line Route (see Appendix D). Although some suitable habitat for this species occurs on the site, and this species may occur occasionally as a migrant or winter visitor, the site is subject to frequent farming activities that preclude the presence of the species at some locations. Any impacts to burrowing owls would be reduced to less than significant levels through the implementation of APMs BIO-1 and BIO-3.

Suitable habitat for special-status plants is present along Proposed Telecommunication Route 2 where extant native vegetation exists on West Valley Boulevard west of the Tehachapi city limits to Cummings Valley. Suitable habitat for special-status plants is present along Proposed Telecommunications Route 1 on patches of extant native vegetation along Highline Road and the easternmost segment of this route within the California Correctional Institution. Construction activities along the Proposed Telecommunications Routes would have the potential to impact the identified special-status plants and their habitats. Impacts on these species or their habitat, if present, would be reduced to less than significant levels through the implementation of APMs BIO-1 and BIO-5.

Limited habitat for the state-listed Tehachapi slender salamander occurs along the Proposed Telecommunication Route 1 between the Tehachapi city limits and Cummings Valley and on Proposed Telecommunications Route 2 within the California Correctional Institution. Construction activities along the proposed telecommunications routes would have the potential to impact the Tehachapi slender salamander. Impacts to this species, if present, would be reduced to less than significant levels through the implementation of APMs BIO-1 and BIO-4.

Proposed Telecommunications Routes

Less Than Significant Impact. The Proposed Telecommunications Routes 1 and 2 provide suitable habitat and/or foraging habitat for special-status wildlife species: Cooper's hawk, ferruginous hawk, prairie falcon, coast horned lizard, tricolored blackbird, golden eagle, Swainson's hawk, mountain plover, northern harrier, yellow warbler, white-tailed kite, Merlin, California condor, Townsend's big-eared bat, hoary bat, and American badger. Construction activities along the proposed telecommunications routes would have the potential to impact these species and their habitat. Impacts to these species or their habitat, if present, would be reduced to less than significant levels through the implementation of APMs BIO-1 and BIO-2.

Surveys for burrowing owl conducted in 2010 and 2011 did not produce evidence of burrowing owl on or near the proposed telecommunication routes (see Appendix D). Although some suitable habitat for this species occurs on the site, and this species may occur occasionally as a

[1] The 6.5 acres of temporary impacts anticipated for subtransmission line segments construction is a conservative estimate that does not take into account the fact that some temporary impacts associated with this component of the project would also occur on the same disturbed area already accounted for at the proposed substation site.

migrant or winter visitor, the site is subject to frequent farming activities that preclude the presence of the species at some locations. Any impacts to burrowing owls would be reduced to less than significant levels through the implementation of APMs BIO-1 and BIO-3.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in less than significant impacts to biological resources.

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

Construction Impacts

No Impact. The proposed Banducci Substation site contains an agricultural drainage ditch, potentially under the jurisdiction of the CDFG pursuant the CFG Code. No other riparian habitat or sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS occurs on or within the proposed Banducci Substation site.

Construction of the proposed Banducci Substation site would not result in any substantial adverse impact to riparian habitat or other sensitive natural community; therefore, impacts under this criterion would be less than significant.

The Proposed 66 kV Subtransmission Line routes would be located on road shoulders in nonnative grassland, disturbed, and agricultural areas. Construction of this part of the Proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS.

The Proposed Telecommunications Routes would be located on road shoulders in nonnative grassland, disturbed, and agricultural areas with limited native vegetation. Construction of this part of the Proposed Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFG or USFWS.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in less than significant impacts to biological resources.

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, and coastal) through direct removal, filling, hydrological interruption, or other means?

Construction Impacts

Less Than Significant Impact. The proposed Banducci Substation site contains no federally protected wetlands as defined by Section 404 of the CWA. Therefore, construction of the proposed Banducci Substation would result in no impacts to wetlands.

No federally protected wetlands as defined by Section 404 of the CWA are present on the Proposed 66 kV Subtransmission Line routes. Construction and operation of the Proposed Subtransmission Line would not have a substantial adverse effect on federally protected wetlands. Hydrophytic vegetation present in certain drainages and tributaries to Brite Creek likely meet the definition of wetland under Section 404 of the CWA, such as those that cross the Proposed Telecommunications Route 2 along West Valley Boulevard, west of the City of Tehachapi. Additionally, small pockets of Big Sagebrush Scrub (a sensitive habitat) occur in the eastern half of the Proposed Telecommunications Route 2. A jurisdictional delineation would be conducted to describe the type and extent of waters of the United States, including wetlands, and/or waters of the State within the proposed impact area. The presence or absence of wetlands would be verified through an analysis of any hydrological conditions, hydrophytic vegetation, and hydric soils pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008). Prior to any impacts to jurisdictional areas, permits/agreements from the USACE, the CDFG, and the RWQCB shall be obtained for direct and indirect impacts to areas within these agencies' jurisdictions. Acquisition and implementation of the permit/agreement may constrain proposed activities. SCE would implement all measures required by the permits/agreements as issued by the resource agencies, potentially including restoration of disturbed jurisdictional areas and/or replacement at a minimum ratio of 1:1, or as otherwise agreed to by the resource agencies. Construction activities would have the potential to impact these hydrologic features. Implementation of APMs BIO-1 and BIO-5 would reduce this impact to less than significant levels.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in less than significant impacts to biological resources.

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 corridor, or impede the use of native wildlife nursery sites?

Construction Impacts

No Impact. The proposed Banducci Substation site would be located on agricultural land and would be surrounded by similar land in every direction. As discussed in Appendix D, agricultural land contains limited native vegetation that would be suitable for native or migratory species in the Substation Study area. Construction and operation of the proposed Banducci Substation would therefore not interfere substantially with migratory wildlife, established wildlife corridors, or native wildlife nursery sites. Therefore, construction and operation of the proposed Banducci Substation site would not impact wildlife movement.

The Proposed 66 kV Subtransmission Line routes would not obstruct or impede wildlife movement and would therefore not interfere substantially with migratory wildlife, established wildlife corridors, or native wildlife nursery sites. Therefore, construction and operation of the Proposed 66 kV Subtransmission Line routes would not impact wildlife movement.

The Proposed Telecommunications Routes 1 and 2 would not obstruct or impede wildlife movement and would therefore not interfere substantially with migratory wildlife, established wildlife corridors, or native wildlife nursery sites. Therefore, construction and operation of the proposed telecommunications routes would not impact wildlife movement.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in less than significant impacts to biological resources.

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Construction Impacts

Less Than Significant Impact. Construction and operation of the Proposed Banducci Substation would not conflict with any local policies or ordinances protecting biological resources. Additionally, the proposed Banducci Substation site contains no native trees; therefore, construction and operation of the Proposed Banducci Substation site would not conflict with any tree preservation policies or ordinances.

Construction and operation of the Proposed 66 kV Subtransmission Line routes would not conflict with any local policies or ordinances protecting biological resources. Additionally, the Proposed 66 kV Subtransmission Line routes contain no native trees; therefore, construction and operation of this portion of the Proposed Project would not conflict with any tree preservation policies or ordinances.

Although located on road shoulders in nonnative grassland, disturbed, and agricultural areas with limited native vegetation, several oak trees occur within the Proposed Telecommunications Route 2 on West Valley Boulevard west of the Tehachapi city limits and on Proposed Telecommunications Route 1 within the California Correctional Institution property. As described in Section 3.9: Environmental Surveys, prior to construction, SCE would identify any trees that would interfere with the construction of the Proposed Project and would consult with jurisdictional agencies prior to any tree alteration or removal. The Proposed Project would be maintained consistent with CPUC G.O. 165, and may require occasional tree trimming. If the tree trimming is to the extent that would require a tree alteration or removal permit, SCE would consult with a local agency certified arborist and obtain permits consistent with the conditions of the local agency.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in less than significant impacts to biological resources.

Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Construction Impacts

No Impact. The proposed Banducci Substation would not be located within the boundaries of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or State HCP.

The Proposed 66 kV Subtransmission Line routes would not be located within an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan area. No conflicts with such plans are anticipated.

The Proposed Telecommunications Routes would not be located within an adopted HCP, NCCP, or other approved local, regional, or State HCP area. No conflicts with such plans are anticipated.

Operation Impacts

No Impact. Operation of the Proposed Project would consist of minor maintenance and emergency repairs and would result in no impacts to biological resources.

4.4.5 Applicant Proposed Measures

SCE has developed APMs to be incorporated into the Proposed Project to minimize the potential for significant impacts related to biological resources. The APMs are summarized in Table 4.4-1: Applicant Proposed Measures.

Table 4.4-1: Applicant Proposed Measures

APM	Description
APM BIO-1	**Pre-construction Surveys and Construction Monitoring.** To the extent feasible, biological monitors would monitor construction activities in areas with special-status species, native vegetation, wildlife habitat, or unique resources to ensure such resources are avoided.
APM BIO- 2	**Pre-Construction Surveys for Nesting Birds/Raptors.** SCE would conduct project-wide nesting bird surveys and remove trees and other vegetation if feasible outside of the nesting season. If a tree or pole containing a raptor nest must be removed during nesting season, or if work is scheduled to take place in close proximity to an active nest on an existing transmission tower or pole, SCE biologists would determine appropriate nesting buffers based on a project specific nesting bird management plan or consultation with the appropriate agencies.
APM BIO- 3	**Burrowing Owl.** Biologists would conduct a preconstruction burrowing owl survey of the Proposed Project Study Area no more than 30 days prior construction. Construction activities will be scheduled and planned to avoid burrowing owls and their burrows. A 250-foot buffer will be placed around active nest and the site will be avoided, where feasible. If occupied burrows cannot be avoided, an appropriate relocation strategy would be developed in conjunction with the CDFG and may include collapsing burrows outside of nesting season and using exclusionary devices to reduce impacts to the burrowing owl. Biological monitors would monitor all construction activities that have the potential to impact active burrows.
APM BIO- 4	**Tehachapi Slender Salamander.** If project activities would be located within oak woodlands and ravines, construction activities would avoid displacement of rocks, logs, bark, and other debris in thick leaf litter, near talus slopes. For these areas, a biologist would be present to ensure that construction activities do not impact this species, particularly during periods of peak activity, such as rainy or wet nights with moderate temperatures.
APM BIO- 5	**Avoidance of Sensitive Habitats.** SCE would minimize impacts and permanent loss of Big Sagebrush Scrub, oak woodlands, and aquatic features at construction sites by flagging native vegetation to be avoided. If unable to avoid impacts to native vegetation, a project revegetation plan would be prepared in coordination with the appropriate agencies for areas of native habitat temporarily impacted during construction.

4.4.6 Alternative

Site Alternative B

Implementation of Site Alternative B would be expected to result in construction-related impacts comparable to those the Proposed Project. Site Alternative B would be located in agricultural lands and could result in a permanent loss of potential raptor foraging habitat in the amount comparable to that expected for the Proposed Project. As this habitat loss is relatively minor compared to the over 13,000 acres of potential habitat for these species in the region, and because no impacts to nesting habitat are expected to occur, impacts to these species would be considered adverse but less than significant.

Surveys for burrowing owl conducted in 2010 and 2011 did not produce evidence of burrowing owl on or near the Site Alternative B Site (see Appendix D). Although some suitable habitat for this species occurs on the site, and this species may occur occasionally as a migrant or winter visitor, the site is subject to frequent farming activities that preclude the presence of the species at some locations. Any impacts to biological resources would be reduced to less than significant levels through the implementation of APMs BIO-1 through BIO-5.

4.4.7 References

Bauer, H.L. (1930). *On the Flora of the Tehachapi Mountains, California*. Bulletin of the Southern Califo1rnia Academy of Sciences. Washington, DC.

Beier, P., K. Penrod, C. Luke, W. Spencer, and C. Cabañero. (2006). *South Coast Missing Linkages: Restoring Connectivity to Wildlands in the Largest Metropolitan Area in the United States.* Pages 555–586 in K. R. Crooks and M. A. Sanjayan (editors), *Connectivity Conservation*. Cambridge, UK.

Block, W. M.; Ganey, J. L.; Severson, K. E.; Morrison, M. L. (1992). *Use of Oaks by Neotropical Migratory Birds in the Southwest*. In: Ffolliott, P. F.; Gottfried, G. J.; Bennett, D. A.; Hernandez C., V.M.; Ortega-Rubio, A.; Hamre, R. H., tech. coords. *Ecology and Management of Oak and Associated Woodlands: Perspectives in the Southwestern United States and Northern Mexico*. Gen. Tech. Rep. RM-218. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station: 65-70.

Burrowing Owl Consortium. (1993). *Burrowing Owl Survey Protocol and Mitigation Guidelines*. Retrieved from http://www.dfg.ca.gov/wildlife/nongame/docs/boconsortium.pdf

California Department of Fish and Game [CDFG]. (2006). *Complete List of Amphibian, Reptile, Bird and Mammal Species in California*. Sacramento, CA. Online Retrieved from http://www.dfg.ca.gov/biogeodata/cwhr/pdfs/species_list.pdf

California Department of Fish and Game. (2011). *California Natural Diversity Data Base*. Sacramento, CA. (Standalone software).

California Native Plant Society [CNPS]. (2011). *Inventory of Rare and Endangered Plants of California*. 7th Edition. Retrieved September 2011from http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi

Hafner, M.S. (1977). *Density and Diversity in Mojave Desert Rodent and Shrub Communities.* Journal of Animal Ecology, 46:925-938

Hawkins, B. A., and E.E. Porter. (2003). *Does herbivore Diversity depend on Plant Diversity? The Case of California Butterflies*. The American naturalist 161, 40-49.

Hickman, J.C. (ed). (1993). *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, CA.

Holland, R. F. (1986). *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, The Resources Agency, California Department of Fish and Game, Sacramento, CA.

Pavlik, B.M., P.C. Muick, S.G. Johnson, and M. Popper. (1991). *Oaks of California*. Cachuma Press, Los Olivos, CA.

Penrod, K., C. Cabanero, P. Beier, C. Luke, W. Spencer, E. Rubin, R. Sauvajot, S. Riley, and D Kamrat. (2006). *South Coast Missing Linkages Project: A Linkage Design for the Santa Monica-Sierra Madre Connection*. South Coast Wildlands, Idyllwild, CA.

Plegadis. (2011). *Biological Resources Survey for Southern California Edison's Banducci Project*. Claremont, CA.

SWCA. (2010). *Tehachapi General Plan*. Retrieved from: http://www.tehachapicityhall.com/index.aspx?NID=81

U.S. Geological Survey. (2005). *Keene, California, 7.5-minute Series Topographic Quadrangle*. Washington, DC: United States Department of the Interior.

U.S. Geological Survey. (2009). *Cummings Mountain, California, 7.5-minute Series Topographic Quadrangle*. Washington, DC: United States Department of the Interior.

U.S. Geological Survey. (2009). *Tehachapi North, California, 7.5-minute Series Topographic Quadrangle*. Washington, DC: United States Department of the Interior.

U.S. Geological Survey. (2009). *Tehachapi South, California, 7.5-minute Series Topographic Quadrangle*. Washington, DC: United States Department of the Interior.

4.5 Cultural Resources

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to cultural resources associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination whether the Proposed Project would result in significant environmental impacts. Potential impacts to archaeological, historical, and paleontological resources are discussed in this section.

This analysis describes the existing and proposed conditions of cultural resources in the Proposed Project Study Area, evaluates the relevant components and characteristics, and assesses the potential impacts that could occur as a result of the Proposed Project.

4.5.1 Environmental Setting

This section summarizes the archaeological, historical, and paleontological settings of the Proposed Project Study Area.

Archaeological and Historic Resources

Regional Overview

The Proposed Project Study Area is located in Kern County, California. The Substation Study Area is located within the unincorporated Cummings Valley, part of the Greater Tehachapi Area (GTA) of Kern County. General overviews of related cultural chronologies were presented by McGuire and Garfinkel (1979) and Moratto (1984). Moratto identified the Sierran crest as "a boundary between the ethnographic Tübatulabal on the west slope and the Numic Kawaiisu and Panamint of the Great Basin." The cultural chronology provided below comes primarily from Moratto (1984). Given the geographic placement of the Kawaiisu territory, as identified by Zigmond (1981), between the southern Sierra Nevada and the Mojave Desert, it is highly probable that cultural phases specific to each region would be present in the archaeological record for the Proposed Project. The Proposed Project Study Area is located approximately 12 miles from the southern edge of Tübatulabal territory and the environmental resources of the area are more similar to those found in the Sierra Nevada. As such, the cultural chronology likely resembles that of the southern Sierra Nevada, which is presented in this section.

Paleoindian (to 10,000 BP)

There has been a variety of terms used to classify known and postulated early human occupations in the Mojave Desert and the arid West. At this point in the researcher's understanding of the record, the term "Paleoindian" is used as a catchall to refer to material belonging to the Fluted Point Tradition or earlier, including any remains belonging to a Pre-projectile Point Period. The earliest agreed upon archaeological culture in the New World is Clovis, typified by a particular type of fluted projectile point. These points are generally viewed as representing a Big Game Hunting Tradition, which exploited Pleistocene megafauna such as mammoth and bison (Davis, 1978; Chartkoff and Chartkoff, 1984; Moratto, 1984). While there

are several isolated Clovis points known from the Mojave Desert and the surrounding area, only one major Clovis occupation site is known at China Lake (Davis, 1973).

Lake Mojave Period (10,000 to 6,000 BP)

More generalized archaeological remains follow the Fluted Point Tradition and fall under the broad designation of the Western Lithic Co-tradition (Davis *et al.*, 1969) or the Western Pluvial Lakes Tradition (Bedwell, 1970). The Lake Mojave Period is associated with the Early Holocene occupation of lakeside environments. The hallmark of the period is the presence of Lake Mojave or Silver Lake projectile points found in association with old lakeshores. Hunting and utilization of lacustrine resources presumably formed the subsistence base. While no Lake Mojave Period sites are known in the immediate vicinity of the Proposed Project, a number of Lake Mojave Period sites are known to be located in the larger vicinity based upon the shore of Pleistocene Lake Mojave and its general vicinity (Davis, 1973).

Pinto Period (6,000 to 4,000 BP)

The Pinto Period is characterized by the presence of Pinto projectile points. The Pinto Period reflects an occupation of the desert after the desiccation of the Pleistocene lakes and the turn to the use of stream and spring habitats. Pinto appears to be a broadly generalized cultural pattern developed in response to the desiccation of the Pleistocene lakes and climatic movement toward a drier environment. It is possible that Pinto developed directly from Lake Mojave at the end of the Pleistocene and ushered in the Archaic in the Mojave Desert (Basgall, 1993; Campbell and Campbell, 1935; Harrington, 1957; Jenkins and Warren, 1986).

Gypsum Period (4,000 to 1,500 BP)

The Gypsum Period is marked by the presence of Elko series projectile points (dart points), although Humboldt Concave Base points also occur (see Smith *et al.*, 1957; Davis and Smith, 1981; Yohe, 1992; Echlin *et al.*, 1981). Very little is known regarding the subsistence base or social organization of Gypsum Period populations, as few sites dating to this period have been excavated. Archaeological remains dating from the Gypsum Period are relatively uncommon in the Mojave Desert. The Gypsum Period appears to represent a somewhat cooler and wetter time in the desert, which may have resulted in increased population and social complexity (Sutton, 1990a, 1996; and Gardner, 2002).

Rose Spring Period (1,500 to 800 BP)

The Rose Spring Period, which is roughly equivalent to the Amargosa Period (Wallace, 1962) and the Saratoga Springs Period (Warren, 1984; Warren and Crabtree, 1986), is thought to represent a return to more mesic conditions, with settlement and subsistence likely focused on lacustrine resources (*e.g.*, Sutton, 1990, 1991a, 1991b; Gardner, 2002). Sites dating to this period are relatively common in the western Mojave Desert (Wallace and Taylor, 1959; Lanning, 1963; Sutton 1990, 1991a, 1991b; Whitley *et al.*, 1988; Yohe, 1992; Gardner, 2002). The marker artifact for this period is the Rose Spring series projectile point, which appears to reflect the introduction of the bow and arrow to the area, replacing dart points used in conjunction with the atlatl.

Late Prehistoric Period (800 BP to Historic Contact)

The Late Prehistoric Period (sometimes referred to as the Protohistoric Period [*e.g.*, Warren, 1984]), is characterized by Desert series (Desert Side-Notched and Cottonwood) projectile points for use with bows and arrows. This period presumably reflects the late prehistory of the ethnographic groups inhabiting the region (Sutton, 1996). The Late Prehistoric Period was much more xeric than the Rose Spring or Gypsum eras, with an apparent change in subsistence and settlement focus to streams, springs, and wells (Sutton, 1990).

Ethnohistoric Background

The extreme western Mojave Desert was claimed by the Kawaiisu during the ethnographic period with the Kitanemuk living immediately to the south. Little is known about the Kawaiisu although some ethnographic data can be found in Gifford (1917) and Driver (1937) while general summaries are presented in Kroeber (1925) and Zigmond (1986). In addition, information on specialized topics is offered in Sutton (1982), Sutton and Greene (1988), and Zigmond (1941, 1977, 1978, 1980, 1981).

The Kawaiisu occupied the southern Sierra Nevada south of the Kern River and into the northern Tehachapi Mountains just south of Tehachapi Pass. They also claimed portions of the western Mojave Desert, including the Proposed Project Study Area, although it seems that these areas were used only on an ephemeral basis during the ethnographic period. Kroeber (1925) estimated that there were about 500 Kawaiisu just prior to European contact.

The Yokuts lived to the west of the Kawaiisu, in the San Joaquin Valley. The Kawaiisu often ventured into the San Joaquin Valley to trade, to interact, and to conduct game drives. The Tübatulabal and the Owens Valley Paiute lived to the north of the Kawaiisu. The Panamint Shoshone lived in the desert to the east and north of the Kawaiisu, while the Kitanemuk lived to the south of them.

The social organization of the Kawaiisu was centered on the family group (Zigmond, 1986). Although there were no formal political groupings (at least during the ethnographic period), the position of chief (or headman) was conferred "simply through tacit acknowledgment of the people about him" (Zigmond, 1986). The qualifications for chief depended upon wealth (Kroeber, 1925) and might be passed from father to son, although such status was not automatically inherited, as "acceptance was dependent upon personal endowment" (Zigmond, 1986).

The Kawaiisu economy was one of hunting and gathering. No agriculture was practiced, but there is evidence of the pruning of tobacco plants to stimulate growth and of the burning of wild seed fields to improve plant yields for the following year (Zigmond, 1941). Acorns were a major staple (Zigmond, 1986), but many other plants were used as well. Zigmond (1981) identified over 350 taxa of plants used by the Kawaiisu. Of that number, 120 were used for food, 100 for medicine, 90 for miscellaneous purposes, and 40 for ritual activity. Most of these plants were gathered in the mountains; plants collected from the desert were in the minority (Zigmond, 1986). Numerous animals were also hunted, including deer, chuckwalla, and bighorn sheep. Pronghorn and rabbits were hunted communally (Zigmond, 1986). While little is known of Kawaiisu material culture, ethnographic data indicate that it was varied and complex.

Many groups passed through or utilized the western Mojave Desert from time to time. Along with the Owens Valley Paiute, the Kitanemuk, and the Yokuts, these undoubtedly included the Chumash, Mojave, Chemehuevi, Vanyume, and others. External relations between Kawaiisu and other groups were generally friendly, although there were intermittent hostilities, particularly with the Yokuts. Trade was conducted with a number of groups, including the Western Shoshone of Little Lake, with whom the Kawaiisu traded acorns for obsidian and salt (Garfinkel *et al*., 1979). Intertribal game drives were conducted primarily with the Chumash, Yokuts, and the Tübatulabal (Zigmond, 1986).

Historical Period (Historic Contact to Present)

The Tehachapi Mountains and western Mojave Desert sustained growing communities of European- and Asian-Americans following the gold rush of the 1840s and the introduction of the railroad to the mountain range. Considered by many to be the first European to discover the Tehachapi Valley, Padre Francisco Garcés arrived in the San Joaquin Valley in 1776. Noted travelers to this area prior to settlement included Jedediah Smith, Ewing Young, Kit Carson and John C. Fremont (Gossard, 2007). In 1853, surveyors (led by Lieutenant Robert S. Williamson) entered the area to find a suitable route for a railroad (Fordney, 2008). Following the initial discovery in 1849 of gold in the California hills and the Kern River Rush of 1854, prospectors began to enter the Tehachapi Valley in search of wealth and prosperity. Gold was discovered in the Grizzly and Water Canyons south of Tehachapi, and by the time the Southern Pacific Railroad arrived in the Tehachapi Valley in 1876, there were two small towns: Williamsburg (1867) and Greenwich (1875) (Gossard, 2007). Williamsburg (Old Town) was named after the first resident James Williams. The town of Tehachapi, originally named Summit Station (1876) and later Tehachapi Summit, was the pinnacle of railroad construction before the descent into the Mojave Desert. The first business to open was a saloon followed by a restaurant with hotels, liveries, feed lots, and stores (Gossard, 2007).

Brite Valley, where a portion of the telecommunications facilities would be located, was named for John and Amanda Brite who purchased a majority of this area in the 1850s. The Brites are remembered locally as the first permanent settlers in the small valley. Their original home was adobe and served as the home for their family of 15. Their two-story Victorian home at the base of the Cummings Mountain was built in 1892. The Brites built and operated a lumber mill while the Brites' sons branched off into the livestock business. The remains of Brite family ranch buildings are visible along Cummings Valley Road.

Cummings Valley, located to the southeast of the Proposed Project Study Area, was named for George Cummings, the first settler who entered the valley while herding cattle in 1849 or 1850. An Austrian by birth, he returned in 1854 and established a cattle ranch, which incorporated the former Hart Ranch (Gossard, 2005). The Pacific Rural Press, on May 5, 1877, reported that Cummings had 2,000 fruit trees on his farm (Martin, 1877, p. 275). The former site of the Cummings Valley School is located on the northwest corner of the current Pelliser and Highline Roads opposite the Preferred Site Alternative A (15C). This circa-1910 school building, constructed of concrete and wood, was a total loss from the 1952, Richter-scale 7.7-magnitude White Wolf earthquake (Gossard, 2005).

Banducci Road, which is located south of the Proposed Project Study Area, was named after the Banducci family who arrived in 1900. Angelo and Jane Banducci purchased a ranch in the

Cummings Valley where they farmed, raised livestock, and made charcoal. An experienced midwife, Jane established a thriving practice in Cummings Valley (Gossard, 2005). The original Banducci Road followed the bottom of Water Canyon along Cummings Creek and was used until the county constructed the new road in 1930 (CVPA, 1995).

Paleontological Resources

Paleontological resources include fossil remains and their respective fossils sites, associated fossil specimen data and corresponding geological and geographic site data, and the fossil-bearing rock units that immediately underlie the surface. Fossils are the remains of ancient organisms that are preserved in sedimentary strata of the Earth's crust. Fossils are considered an important scientific resource because of their use in (1) documenting the evolution of particular groups of organisms, (2) reconstructing the environments in which they lived, and (3) in determining the ages of the rock units in which they occur and of the geological events that resulted in the deposition of the sediments constituting these rock units.

The Proposed Project would be located within the Sierra Nevada Geomorphic Province (California Geologic Survey, 2002). The Sierra Nevada Geomorphic Province is a 400-mile long westward-tilted fault block that is 50 to 80 miles wide. This province is characterized by an eastern escarpment that is steep and high and a gentle western slope (about 2 degrees) that disappears under the sediments of the Great Valley Geomorphic Province, located to the west (California Geologic Survey, 2002). The Sierra Nevada Geomorphic Province is characterized by extensive exposures of granitic rock from the Sierra Nevada Batholith as well as metamorphic rocks. The Proposed Project would be located at the southern end of the Sierra Nevada Geomorphic Province and would also be located immediately north of the Mojave Desert Geomorphic Province, separated by the Garlock Fault and the Transverse Ranges Geomorphic Province.

Specifically, the Proposed Project would be located within the Tehachapi Mountains. The Tehachapi Mountains were primarily formed by movement along the Garlock Fault located to the south. The alignment of the telecommunications routes passes through three valleys gently sloping from west to east, known as Cummings Valley, Brite Valley, and Tehachapi Valley.

According to the geology map compiled by Dibblee (2008), the majority of the Proposed Project would be located within sediments composed of Quaternary alluvium from the Holocene (less than 10,000 years ago). The Quaternary alluvium is generally considered too young to contain fossils; however, these sediments can exist as a very thin veneer on top of older sediments that can contain fossils.

There are exposures of older Quaternary alluvium from the middle to late Pleistocene (300,000 to 10,000 years ago) as well as a few exposures of Late Jurassic to early Cretaceous (approximately 160 to 100 million years ago) igneous rocks (primarily diorite and granite) and Precambrian (more than 542 million years ago) metamorphic schist. Fossils have been collected in Pleistocene deposits from excavations for roads, housing developments, and quarries within California (Jefferson, 1991a and 1991b; Miller, 1971). Remains of Rancholabrean animals, including elephants, horses, bison, camels, saber-tooth cats, deer, and sloths are known from these localities. The potential exists to encounter similar fossils in all Pleistocene alluvium. The igneous and metamorphic rocks within the Proposed Project Study Area do not contain fossils.

4.5.2 Regulatory Setting

4.5.2.1 Federal

There are no applicable federal laws, ordinances or policies related to cultural resources for the Proposed Project.

4.5.2.2 State

California Environmental Quality Act

CEQA requires projects to comply with requirements regarding cultural resources on lands proposed for development. The lead agency is required by California Public Resources Code (CPRC) Section 21000 *et seq*., to identify and examine any significant adverse environmental effects that may result from activities associated with such projects (Public Resources Code Sections 21083.2 and 21084.1). CEQA requires that impacts that a project may have on cultural resources be assessed and requires mitigation if significant (or "unique") cultural sites are to be impacted (Section 21083.2 [a-1] and Appendix K).

The CPRC Section 21083.2 (g) defines a unique archaeological resource to be

> An archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria: (1) contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information; (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.

CEQA uses the term "historical resources" to include the following:

- A resource determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR; CPRC SS5024.1, Title 14 CCR, Section 4850 *et seq*.)

- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the CPRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the CPRC. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant

- Any object, building, structure, site, area, place, record, or manuscript which 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 may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record

If human remains of any kind are found during construction activities, CEQA Guidelines Section 15064.5(e) and Assembly Bill 2641 shall be followed. These guidelines require that all construction activities must cease immediately and the Kern County Coroner and a qualified archaeologist must be notified. The coroner will examine the remains and determine the next appropriate action based on his or her findings. If the coroner determines the remains to be of Native American origin, the Native American Heritage Commission (NAHC) must be notified. The NAHC will then identify a most-likely descendant to be consulted regarding treatment and/or reburial of the remains.

Native American Heritage Commission

Section 5097.91 of the CPRC established the NAHC, whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the CPRC specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

4.5.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County has a General Plan that gives "long-range guidance to those County officials making decisions affecting the growth and resources of the unincorporated Kern County jurisdiction" (Kern County, 2009). Section 1.10.3, *Archaeological, Paleontological, Cultural, and Historical Preservation*, of the General Plan states that the "County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors."

4.5.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to result in impacts to the following questions. Would the Proposed Project:

- Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Disturb any human remains, including those interred outside of formal cemeteries?State regulations affecting cultural resources include CPRC Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5 and Appendix G. CEQA requires the lead agency to carefully consider the effects a project may have if it causes a substantial adverse change in the significance of a historical or archeological resource.

Cultural resources, as designated in CEQA, include prehistoric- and historic-era archaeological sites, districts, and objects; historic buildings, structures, objects and districts; and traditional/cultural sites or the locations of important historical events. CEQA Guidelines Section 15063.5 states that a project may have a significant environmental effect if it causes a substantial adverse change in the significance of a historical resource. Additionally, the lead agency must consider properties eligible for listing on the CRHR or that are defined as a unique archaeological resource in CPRC Section 21083.2.

Appendix G of the CEQA Guidelines also states that, "a project will normally result in a significant impact on the environment if it will …disrupt or adversely affect a paleontological resource or site or unique geologic feature, except as part of a scientific study." CPRC Section 5097.5 specifies that any unauthorized removal of paleontological remains is a misdemeanor.

California Register of Historical Resources

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 to the CRHR are termed "historical resources." Archaeological resources that do not meet CRHR criteria also may be evaluated as "unique"; impacts to such resources could be considered significant, as described below.

A site meets the criteria for inclusion on the CRHR, if it meets one of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

2. 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

4. It has yielded, or may 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

historical resource may not retain sufficient integrity to meet the criteria for listing in the National Register of Historic Places (NRHP), but it may still be eligible for listing in the California Register.

The CRHR automatically includes the following:

- California properties listed on the NRHP and those formally determined eligible for the NRHP
- California Registered Historical Landmarks from No. 770 onward
- Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Commission for inclusion on the CRHR

Other resources that may be nominated to the CRHP include the following:

- Historical resources with a significance rating of category 3 through 5
- Individual historical resources
- Historical resources contributing to historic districts
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone

Impacts to "unique archaeological resources" are also considered under CEQA, as described under CPRC Section 21083.2. A unique archaeological resource is an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one of the following criteria:

- Contains information needed to answer important scientific questions and there is a demonstrable public interest in that information;
- Has a special and particular quality, such as being the oldest of its type or the best available example of its type;
- Is directly associated with a scientifically recognized important prehistoric or historic event or person; or
- A non-unique resource is one that does not fit the above criteria.

4.5.4 Impact Analysis

Archaeological and Historical Resources

The cultural resources survey report contains information that is confidential. As such, the report is being submitted to the CPUC by SCE under separate confidential cover, although the report should be considered incorporated into this PEA by this reference. In addition, a

generalized summary of the information in the report has been incorporated into the analysis in this PEA in order to provide a basis for the environmental analysis and conclusions herein without disclosing information which may facilitate damage to and/or looting of sensitive resources. The following outlines the results of archaeological and historical resources investigations of the Proposed Project in Kern County, California.

Record Search Results

On May 13, September 24, October 6, and December 9, 2010 and July 15, 2011, cultural resources records searches were conducted at the Southern San Joaquin Valley Information Center (SSJVIC), housed at California State University, Bakersfield. The records search was conducted for a 0.5-mile radius centered on the Proposed Project Study Area. The records search materials contain information collected from the California Historical Resources Information System that includes the locations of previous cultural resources surveys and prehistoric and historic sites as well as listings in the NRHP, CRHR, California Historic Landmarks, and California Points of Historic Interest.

No previously recorded cultural resources were identified within the Proposed Project Study Area. Thirty-two previously recorded cultural resources have been documented within a 0.5-mile radius of the Proposed Project Study Area. Twenty-nine previous cultural resources studies cover portions of the Proposed Project Study Area, all studies produced negative results. Sixty-seven previous cultural studies have been conducted within 0.5-mile of the Proposed Project Study Area; all with negative results for cultural resources (Orfila, 2011).

Field Survey Results

The cultural resources field surveys took place in March, July, and December 2011, and resulted in the recording of four new historic-era sites. Table 4.5-1: Newly Recorded Historic Era Sites provides the descriptions of the newly recorded historic era resources.

Proposed Substation Site

The proposed Banducci Substation site is a 6.3-acre parcel located on the southeastern corner of Dale Road and Pelliser Road. At the time of the latest survey (December 6, 2011), the top layers of soil had been turned an estimated 8 to 12 inches in depth, thus visibility was excellent (100 percent). The parcel was surveyed using 15-meter transects. No cultural resources were observed during the survey (Orfila, 2011).

Proposed 66 kV Subtransmission Line Route

The Proposed 66 kV Subtransmission Line Route would be located on the east side of Pelliser Road and adjacent to the proposed substation parcel. The proposed subtransmission route is within the existing and already disturbed right-of-way (ROW) of the Corrections-Cummings-Kern River 1 66 kV line. Additionally the proposed route was included within the survey footprint of the proposed substation. No cultural resources were observed during the survey (Orfila, 2011).

Distribution Getaways

Three new underground distribution getaways consisting of cable, conduits and vaults would be located within the boundaries of the proposed substation parcel and were surveyed as part of the footprint of the proposed substation. No cultural resources were observed during the survey (Orfila, 2011).

Proposed Telecommunications Route 1 (Banducci-Monolith No. 1)

The Proposed Telecommunications Route 1 would be approximately 14.5 miles long and would exit the proposed Banducci Substation to the west and then extend north to Highline Road. The route would continue eastward along Highline Road, through the California Correctional Institute, and would continue on Highline Road eastward to the existing Cummings Substation. The route then would leave Cummings Substation east to Jameson Street where it would turn north and head into the Monolith Substation. The area is dominated by Highline Road (a paved street), various ranches, ranchettes, and domestic properties. The pedestrian survey consisted of 15 meter transects within a 60-meter wide corridor (30 meters on either side of the pole line). Two new historic sites Cistern and Chimney (P-15-009613/CA-KER-8362H) and Metal Barn/Shed on Abandoned Farm/Ranch (P-15-014996/CA-KER-8361H) were recorded during the cultural resources survey.

Proposed Telecommunications Route 2 (Banducci-Monolith No. 2)

The Proposed Telecommunications Route 2 would be approximately 17.5 miles long and would exit the proposed Banducci Substation to the west and would turn north on Pelliser Road then turn east on Giraudo Road to West Valley Boulevard. The proposed cable route would continue east to Woodford-Tehachapi Road and continue south to Cherry Lane. The route would continue east to South Curry Street and head north, then west on West C Street, and then north on south Mill Street. It would then head east on West H Street to Tehachapi Boulevard in existing underground vaults and enter Monolith Substation. The survey area is dominated by paved roads, the commercial district of Tehachapi, various ranches, ranchettes, and domestic properties. The pedestrian survey consisted of 15 meter transects within a 60-meter wide corridor (30 meters on either side of the pole line). One and one quarter miles of the proposed route, located within California Correctional Facility (a maximum security prison) in Cummings Valley, were surveyed using a vehicle due to the disturbed nature of the grounds and security concerns. In addition, a pedestrian survey of a 30-meter radius around the two existing poles (2175020E and 314035E) located within the prison was conducted. Two historic sites (Douglas Gasoline Station [P-15-014997] and Ranch Motel [P-15-014995]) were recorded during the cultural resources survey.

California Register of Historical Resources Eligibility

The CRHR eligibility criteria identified in Section 4.5.2.1 were used for the archaeological and historic sites and architectural structures in the Proposed Project Study Area. Four historic-era resources were identified during the pedestrian field survey (Table 4.5-1: Newly Recorded Historic-Era Sites).

Table 4.5-1: Newly Recorded Historic-Era Sites

Site Number	Description	Project Area	CRHR Eligibility
P-15-009613/ CA-KER-8362H	Cistern and Chimney	Proposed Telecommunications Route 1	Undetermined
P-15-014995	The Ranch Motel	Proposed Telecommunications Route 2	Potentially Eligible
P-15-014996/ CA-KER-8361H	Metal Barn/Shed on Abandoned Farm/Ranch	Proposed Telecommunications Route 1	Undetermined
P-15-014997	Douglas Gasoline Station	Proposed Telecommunications Route 2	Potentially Eligible

None of the historic-era sites were evaluated for listing on the CRHR. The Cistern and Chimney site (P-15-009613/CA-KER-8362H) and the Metal Barn/Shed on Abandoned Farm/Ranch site (P-15-014996/CA-KER-8361H) lack integrity, and may not be eligible for listing on the CRHR; however, in-depth historic research is needed to further evaluate these resources for the CRHR.

The remaining two sites, the Ranch Motel (P-15-014995) and the Douglas Gasoline Station (P-15-014997) may be eligible for the CRHR under Criterion 1. Both sites have the potential to yield information regarding the history of the local area, California, or the nation because of their association with the expansion of recreational vehicle travel in the mid-twentieth century.

Native American Consultation

Southern California Edison (SCE) requested a search of the Sacred Lands File maintained by the NAHC for the Proposed Project Study Area. The Sacred Lands File search revealed that no Native American cultural resources were identified within the Proposed Project Area. The NAHC suggested that SCE consult with Native American tribes and communities and Native American individuals who hold special interest in the Proposed Project Study Area and provided a list of those individuals (Singleton, 2011).

SCE sent a certified letter on July 9, 2011, to the 11 Tribal entities and individuals on the NAHC list. The letter described the Proposed Project, and the cultural resource survey and background research that had been completed at that time. Only the Tejon Indian Tribe responded to the first letter and stated that they had no conflict with the Proposed Project but asked to be notified should any sites or artifacts be discovered during the Project (Morgan, 2011).

Additional follow-up letters and correspondence were sent on April 4, 2012, to the same 11 tribal entities and individuals describing updated information regarding the cultural surveys performed since the initial letter. The Tubatulabal Tribe (Begay 2012) and the Tejon Indian Tribe (Morgan 2012) responded that they had no conflict with the Proposed Project. In June 2012, phone calls were made to those Tribal entities and individuals that had not responded. Three additional comments were received via phone.

Paleontological Resources

Paleontological analysis was conducted in order to determine the sensitivity and potential presence of paleontological resources, in accordance with CEQA and the CPRC Section 5097.5 (Stats, 1965, c1136, P. 2,792). The analysis also complies with the guidelines and significance criteria specified by the Society for Vertebrate Paleontology (SVP).

A paleontological assessment was conducted by LSA Associates, Inc. (Smith, 2011) which consisted of a review of geologic maps and a paleontological literature review for the Project Area and surrounding vicinity. Additionally, the assessment included a paleontological locality search at the Natural History Museum of Los Angeles County (LACM). Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

In its "Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontological Resources," SVP (1995, pp. 22–27) defines three categories of paleontological sensitivity (potential) for rock units as described below:

- **High Potential**. Rock units from which vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered and are considered to have a high potential for containing significant nonrenewable fossiliferous resources. These units include, but are not limited to, sedimentary formations and some volcanic formations that contain significant nonrenewable paleontological resources anywhere within their geographical extent and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical, and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas that contain potentially datable organic remains older than Recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways are also classified as significant.

- **Low Potential**. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils. These deposits generally will not require protection or salvage operations.

- **Undetermined Potential**. Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

If an area is determined to have a high potential for containing paleontological resources, the SVP recommends that a program to mitigate impacts be developed. In areas of high sensitivity,

a pre-excavation survey is also recommended to locate surface concentrations of fossils that may need special salvage methods.

Would the construction of the Proposed Project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Construction Impacts

No Impact. Four historic-era resources (the Ranch Motel [P-15-014995], the Douglas Gasoline Station [P-15-014997], the Cistern and Chimney site [P-15-009613/CA-KER-8362H], and the Metal Barn/Shed on Abandoned Farm/Ranch site [P-15-014996/CA-KER-8361H]) are located within the Proposed Project Study Area. No ground-disturbing work is proposed along sites P-15-014997, P-15-009613/CA-KER-8362H, and P-15-014996/CA-KER-8361H; therefore, there would be no expected impacts to the resources from the Proposed Project. Two wood poles are proposed for removal and replacement near site P-15-014995 as part of the proposed telecommunications facilities. P-15-014995 is a standing structure that is currently an operating and functioning facility and will be avoided during any construction activities associated with the Proposed Project. As such, impacts due to the construction of the Proposed Project would not cause a significant adverse change to historical resources.

Operation Impacts

No Impact. Operation impacts from the Proposed Project would not differ from the construction impacts; therefore, operation of the Proposed Project would not cause significant adverse change to historical resources.

Would the Construction of the Proposed Project cause a substantial adverse change in the significance of archaeological resource pursuant to Section 15064.5?

Construction Impacts

No Impact. Two archaeological resources, the Cistern and Chimney site [P-15-009613/CA-KER-8362H] and the Metal Barn/Shed on Abandoned Farm/Ranch site [P-15-014996/CA-KER-8361H]), are located within the Proposed Project Study Area. No ground-disturbing work is proposed at either site; therefore, there would be no expected impacts to the resources from the Proposed Project.

As such, impacts due to the construction of the Proposed Project would not cause significant adverse change to archaeological resources.

Operation Impacts

No Impact. Operation impacts from the Proposed Project would not differ from the construction impacts. Therefore, operation of the Proposed Project would not cause a significant adverse change to archaeological resources.

Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Construction Impacts

Proposed Substation Parcel

Less Than Significant Impact. No paleontological resources were identified in the vicinity of the proposed Banducci Substation site. The proposed Banducci Substation parcel has been identified as an area of low paleontological sensitivity for ground disturbance to the depth of 10 feet. Since construction activities on this parcel may exceed 10 feet in depth with the installation of six proposed tubular steel poles (TSPs) and two proposed lightweight steel (LWS) poles, there is the potential "to directly or indirectly destroy a unique paleontological resource." The implementation of Applicant Proposed Measure (APM) PA-1 would reduce construction impacts to less than significant.

Proposed Telecommunication Routes 1 and 2 (Banducci-Monolith No. 1 and 2)

Less Than Significant Impact. Based on the results of the locality search and an examination of geologic maps, as well as the proposed excavation depths associated with the Proposed Project, portions of the proposed telecommunication routes would be in an area that has a high sensitivity for paleontological resources (the western side of the Tehachapi Valley). One paleontological locality, LACM 3722, was located within the City of Tehachapi (Smith, 2011). Impacts to significant paleontological resources due to the construction of the Proposed Project would be less than significant with the implementation of APM PA-1.

Operation Impacts

Proposed Banducci Substation Parcel

No Impact. No paleontological resources were identified in the area of the Proposed Project. The proposed Banducci Substation parcel has been identified as an area of low paleontological sensitivity for ground disturbance to the depth of 10 feet. However, no new ground disturbances will occur for the Proposed Project during operation; therefore, operation activities would not impact paleontological resources for this portion of the Proposed Project.

Proposed Telecommunication Routes 1 and 2 (Banducci-Monolith No. 1 and 2)

No Impact. Based on the results of the locality search and an examination of geologic maps, as well as the proposed excavation depths associated with the Proposed Project, portions of the Proposed Telecommunications Route 1 (Banducci-Monolith No. 1) and the Proposed Telecommunications Route 2 (Banducci-Monolith No. 2) are located in an area that has a high sensitivity for paleontological resources (the western side of the Tehachapi Valley). However, no new ground disturbances would occur for the Proposed Project during operation; therefore, operation activities would not impact paleontological resources for this portion of the Proposed Project.

Would the construction of the Proposed Project disturb any human remains, including those interred outside of formal cemeteries?

Construction Impacts

Less Than Significant Impact. The construction and operation of the Proposed Project would not disturb any known human remains, including those interred outside of formal cemeteries. The record search and field surveys did not identify any resources that have the potential to encounter human remains. If human remains were encountered, all work would stop and the Kern County Coroner and a qualified archaeologist will be notified pursuant to CPRC Sections 5097.98 and 5097.

Operation Impacts

No Impact. Operation of the Proposed Project consists of the routine inspection and maintenance of the proposed Banducci Substation and subtransmission lines. Maintenance and operation of the Proposed Project would not involve the disturbance of subsurface soils or geologic formations. Therefore, operation of the Proposed Project would have no impact to human remains.

4.5.5 Applicant Proposed Measures

No APMs are proposed for archaeological or historical resources.

However, APM PA-1 for paleontological resources would be implemented prior to construction to further ensure that there would be no impacts to paleontological resources in the event of an unforeseen event.

Table 4.5-2: Applicant Proposed Measures

APM	Description
APM PA-1	**Paleontological Resources Treatment Plan.** A Paleontological Resources Treatment Plan shall be developed for construction within areas that have been identified as having a high sensitivity for paleontological resources or in areas where construction activities would exceed 10 feet in depth. The Paleontological Resources Treatment Plan would be prepared by a professional paleontologist in accordance with the recommendations of the SVP.

4.5.6 Alternative

Site Alternative B

Site Alternative B would be expected to result in construction-related impacts that would be comparable to those of the Proposed Project. The alternative substation site contains certain ancillary or appurtenant facilities that include an aboveground fuel tank, truck washing rack, and a computer networking room, all of which would require removal/demolition prior to construction. Other construction-related activities for the alternative would be consistent with the Proposed Project. No previously recorded cultural resources were identified within Site Alternative B during the records search and field survey that were completed for this location (Singleton, 2011; Smith, 2011). Site Alterative B has been identified as an area of low paleontological sensitivity for ground disturbance to the depth of 10 feet (Smith, 2011). Overall, the similar comparable development scenarios of Site Alternative B and the Proposed Project would result in comparable impacts to cultural and paleontological

resources. As with the Proposed Project, APM PA-1 for paleontological resources would be implemented prior to construction.

4.5.9 References

Basgall, M.E. (1993). *Early Holocene Prehistory of the North-Central Mojave Desert* (Doctoral dissertation). University of California, Davis.

Bedwell, S.F. (1970). *Fort Rock Basin*: *Prehistory and Environment*. Eugene: University of Oregon Books.

Begay, D. (2012). Email Re: Proposed Banducci Substation Project. April 5, 2012.

California Geological Survey (CGS) (2002). *California Geomorphic Provinces* (California Geologic Survey Note 36). Sacramento, CA: California Department of Conservation.

Campbell, E.W.C. & Campbell, W.H. (1935). *The Pinto Basin Site* (Southwest Museum Papers No. 9).

Chartkoff, J.L., and K.K. Chartkoff. (1984). *The Archaeology of California*. Stanford: Stanford University Press.

Cummings Valley Protection Association (CVPA) (1995). *Cummings Valley Historical Tour, June 10, 1995*. Retrieved September 17, 2011, from http://www.cvpainc.org/arcvnews.html

Davis, E.L. (1973). The Hord site: A Paleo-Indian Camp. *Pacific Coast Archaeological Society Quarterly, 9*(2), 1–26.

Davis, E.L. (ed.). (1978). The Ancient Californians: Rancholabrean Hunters of the Mojave Lakes Country. *Natural History Museum of Los Angeles County Science Series, 29*.

Davis, E.L., Clark, W.B., & Weide, D.L. (1969). The Western Lithic Co-tradition. *San Diego Museum Papers, 6*. San Diego: San Diego Museum of Man.

Davis, C.A., and G.A. Smith. (1981). *Newberry Cave*. Redlands: San Bernardino County Museum Association.

Dibblee, T.W. Jr. (2008). *Geologic Map of the Cummings Mountain & Tehachapi 15-minute Quadrangles Kern County, California.* Ed. John Minch. Dibblee Geology Center Map #DF-397: First Printing. Scale 1:62,500. Santa Barbara: Santa Barbara Museum of Natural History.

Driver, H. E. (1937). Cultural Element Distributions, VI: Southern Sierra Nevada. *University of California Anthropological Records, 1*(2), 53–154. Berkeley.

Echlin, D.R., P.J. Wilke, and L.E. Dawson. (1981). Ord Shelter. *Journal of California and Great Basin Anthropology, 3*(1), 49–68.

Fordney, B.F. (2008). *George Stoneman: A Biography of the Union General*.

Gardner, J.K. (2002). Testing A Regional Model of Changing Settlement and Subsistence Patterns in the Western Mojave Desert: Results from the Coffee Break Site. *Coyote Press Archives of Great Basin Prehistory, 6*.

Garfinkel, A. P., R. A. Schiffman, and K. McGuire (1979). *Archaeological Inventory in the Southern Sierra Nevada: The Lamont Meadow and Morris Peak Segments of the Pacific Crest Trail*. Bakersfield: California Bureau of Land Management Cultural Resource Publications.

Gifford, E. W. (1917). *Tübatulabal and Kawaiisu Kinship Terms*. Berkeley: University of California Press.

Gossard, G.H. (2005). *Three Valleys of Tehachapi: Bear, Brite, and Cummings*. Arcadia Publishing.

Gossard, G.H. (2007). *Tehachapi*. Arcadia Publishing.

Harrington, M. R. (1957). A Pinto Site at Little Lake, California. *Southwest Museum Papers, 17*. Los Angeles.

Jefferson, G. T. (1991a). *A Catalogue of Late Quaternary Vertebrates from California: Part One. Non-Marine Lower Vertebrate and Avian Taxa* (Natural History Museum of Los Angeles County Technical Reports, No. 5). Los Angeles.

Jefferson, G. T. (1991b). *A Catalogue of Late Quaternary Vertebrates from California: Part Two. Mammals* (Natural History Museum of Los Angeles County Technical Reports, No. 7). Los Angeles.

Jenkins, D.L., and C.N. Warren. (1986). *Test Excavation and Data Recovery at the Awl Site, 4-SBr-4562, A Pinto Site at Fort Irwin, California* (Fort Irwin Archaeological Project Research Report, No. 22).

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kroeber, A. L. (1925) *Handbook of the Indians of California* (Bureau of American Ethnology Bulletin 78).

Lanning, E. P. (1963). The Archaeology of the Rose Spring Site INY-372. *University of California Publications in American Archaeology and Ethnology, 49*(3).

Martin, P.S. (1877). *Bear Valley, Kern County*. Pacific Rural Press. Retrieved from California Digital Newspaper Collection at http://cdnc.ucr.edu/cdnc/ McGuire, K. R., and A. Garfinkel. (1979). *Archaeological Investigations in the Southern Sierra Nevada: The Bear Mountain Segment of the Pacific Crest Trail* (Report on file at the Bureau of Land Management, Bakersfield District Office, California).

Miller, W. E. (1971). Pleistocene Vertebrates of the Los Angeles Basin and Vicinity (exclusive of Rancho La Brea). *Los Angeles County Museum of Natural History Bulletin Science Series, 10*.

Moratto, M. J. (1984). *California Archaeology*. Orlando: Academic Press.

Morgan, K. M. (2011). Letter Re: Proposed Banducci Substation Project. August 17, 2011.

Morgan, K. M. (2012). Letter Re: Proposed Banducci Substation Project. April 13, 2012.

Orfila, R. S. (2011). *A Phase I Cultural Resources Assessment of Telecommunications Lines, Subtransmission Extension Lines, and Proposed Substation Locations for the Banducci Substation Project in Kern County, California*.

Singleton, D. (2011). *Sacred Lands File Search and Native American Contacts List for the "Proposed Banducci Substation Project;" Located in Tehachapi, Kern County, California.*

Smith, B. (2011). *Paleontological Resources Assessment for the Southern California Edison Banducci Substation and Telecommunications Routes Project, Tehachapi, Kern County, California (LSA Project No. SCE1105A).*

Smith, G.A., W. C. Schuiling, L. Martin, R. J. Sayles, and P. Jillson. (1957). *Newberry Cave, California* (San Bernardino County Museum Scientific Series, 1).

Society of Vertebrate Paleontology (SVP). (1995). Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources – Standard Guidelines. *Society of Vertebrate Paleontology News Bulletin, 163*.

Sutton, M.Q. (1990). Two Small Quarry Sites Near Rosamond, Kern County, California. *Archaeology and Ethnohistory of Antelope Valley and Vicinity* (Occasional Paper No. 2). Lancaster: Antelope Valley Archaeological Society.

Sutton, M.Q. (1991a). *Late Prehistoric Environmental and Cultural Change in the Western Mojave Desert* (Paper presented at the annual meetings of the Society for American Archaeology, New Orleans).

Sutton, M.Q. (1991b). *Archaeological Investigations at Cantil, Fremont Valley, Western Mojave Desert, California* (Occasional Papers in Anthropology No. 1). California State University, Bakersfield, Museum of Anthropology.

Sutton, M.Q. (1996). The Current Status of Archaeological Research in the Mojave Desert. *Journal of California and Great Basin Anthropology, 18*(2), 221–257.

Sutton, M.Q. (1982). Archaeology of the Fairmont Buttes. *Pacific Coast Archaeological Society Quarterly, 18*(4), 1–26.

Sutton, M. Q. & Greene, A. (1988). A Note on Kawaiisu Ethnopharmocology. *Society for California Archaeology Newsletter*, *22*(2), 13.

Wallace, W.J. (1962). Prehistoric Cultural Development in the Southern California Deserts. *American Antiquity, 28*(2), 172–180.

Wallace, W.J. & Taylor, E.S. (1959). A Preceramic Site at Saratoga Springs, Death Valley National Monument, California. *Contributions to California Archaeology, 3*(2). Los Angeles.

Warren, C.N. (1984). The Desert Region. In M. Moratto, *California Archaeology* (pp. 339–430). Orlando: Academic Press.

Warren, C.N. & Crabtree. R.H. (1986). Prehistory of the Southwestern Area. In W. L. d'Azevedo (Ed.), *Handbook of North American Indians*, *Vol. 11*, *Great Basin* (pp. 183–193). Washington, DC: Smithsonian Institution.

Whitley, D.S., Gummerman IV, G., Simon, J.M. & Rose, E.H. (1988). The Late Prehistoric Period in the Coso Range and Environs. *Pacific Coast Archaeological Society Quarterly, 24*(1), 2–10.

Yohe, R.M. (1992). *A Reevaluation of Western Great Basin Cultural Chronology and Evidence for the Timing of the Introduction of the Bow and Arrow to Eastern California Based on New Excavations at the Rose Spring Site (CA-INY-372)* (Doctoral dissertation). University of California, Riverside.

Zigmond, M. L. (1941). *Ethnobotanical Studies Among California and Great Basin Shoshoneans* (Doctoral dissertation). Yale University.

Zigmond, M. L. (1977). The Supernatural World of the Kawaiisu. In T. C. Blackburn (Ed.), *Flowers in the Wind: Papers on Ritual, Myth, and Symbolism in California and the Southwest* (Ballena Press Anthropological Papers No. 8, pp. 59–95).

Zigmond, M. L. (1978). Kawaiisu Basketry. *The Journal of California Anthropology, 5*(2), 199–215.

Zigmond, M. L. (1980). *Kawaiisu Mythology: An Oral Tradition of South-Central California* (Ballena Press Anthropological Papers No. 18).

Zigmond, M. L. (1981). *Kawaiisu Ethnobotany*. Salt Lake City: University of Utah Press.

Zigmond, M. L. (1986). Kawaiisu. In W. L. d'Azevedo (Ed.), *Handbook of North American Indians, Vol. 11, Great Basin* (pp. 398–411). Washington, DC: Smithsonian Institution.

4.6 Geology and Soils

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to geology and soils associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of the geology and soils in the Proposed Project Study Area, evaluates the geology and soils characteristics, and assesses the potential impacts that have the potential to occur as a result of the Proposed Project.

4.6.1 Environmental Setting

The Proposed Project would be located in the southern portion of the Sierra Nevada Geomorphic Province. The Sierra Nevada Geomorphic Province is a northwest-trending mountain range nearly 400 miles long and ranging from 40 to 100 miles wide. It is bound by the Great Valley province to the west, the Basin and Range province to the east, and the Cascade Range province to the north. The southern end of the Sierra Nevada province is bound by the Garlock Fault. Uplift (or the elevation of land) along normal faults of the Sierra Nevada frontal fault zone has resulted in a steep, rugged face on the eastern side of the range. Elevations in the province range from 400 to 14,496 feet (122 to 4,418 meters) above mean sea level, the highest point in California and the conterminous United States.

The proposed Banducci Substation would be located within the Cummings Valley, which is underlain by Quaternary alluvium. These deposits are comprised of silty to clayey sand and sandy to clayey silt. The majority of the remaining portions of the Proposed Project along the proposed telecommunications facilities are also underlain by Quaternary alluvium, with short portions of the telecommunications routes underlain by Mesozoic granitic rocks and pre-Cenozoic metasedimentary and metavolcanic rocks undivided (USGS, 2011).

Soils located within the Substation Study Area are defined as Steuber sandy loam. These soils would not have limitations associated with the development of a small development (USDA, 2012). Further, the caving potential for the development of roads and shallow excavations within this soil are low (approximately 0.10 on a scale of 0.01 to 1.00; USDA, 2012). It is anticipated that the soil properties/classification of the proposed Banducci Substation site would be consistent with the findings in the Soil Resource Report (USDA, 2012) conducted for the Substation Study Area. SCE will perform site-specific soil analysis prior to construction for the proposed Banducci Substation site in order to confirm these findings. With respect to the proposed telecommunications facilities, a majority of the proposed facilities would be placed on existing SCE facilities, would not require a substantial amount of ground-disturbing activities, and are located on soils assumed to be stable.

Subsidence at the proposed Banducci Substation site would depend on the construction methods, including the type of equipment utilized.

The Proposed Project would be situated in a seismically active region. As is the case for most areas of Southern California, ground shaking may occur resulting from earthquakes associated with nearby and distant faults. During the life of the Proposed Project, seismic activity associated with active faults in the area may generate moderate to strong ground shaking at the Proposed Project site.

The Proposed Project would not be within a State of California Alquist-Priolo Earthquake Fault Zone. However, the White Wolf Fault, an active left-lateral reverse fault, is approximately 9.7 miles northwest of the proposed Banducci Substation site and approximately 8.5 miles northwest of the proposed telecommunications facilities. The Garlock Fault, an active left-lateral strike-slip fault, is approximately 9 miles south of the proposed Banducci Substation site and approximately 4.3 miles south of the proposed telecommunications facilities (Figure 4.6-1 Alquist-Priolo Zones in the Proposed Project Vicinity).

Surface Fault Rupture

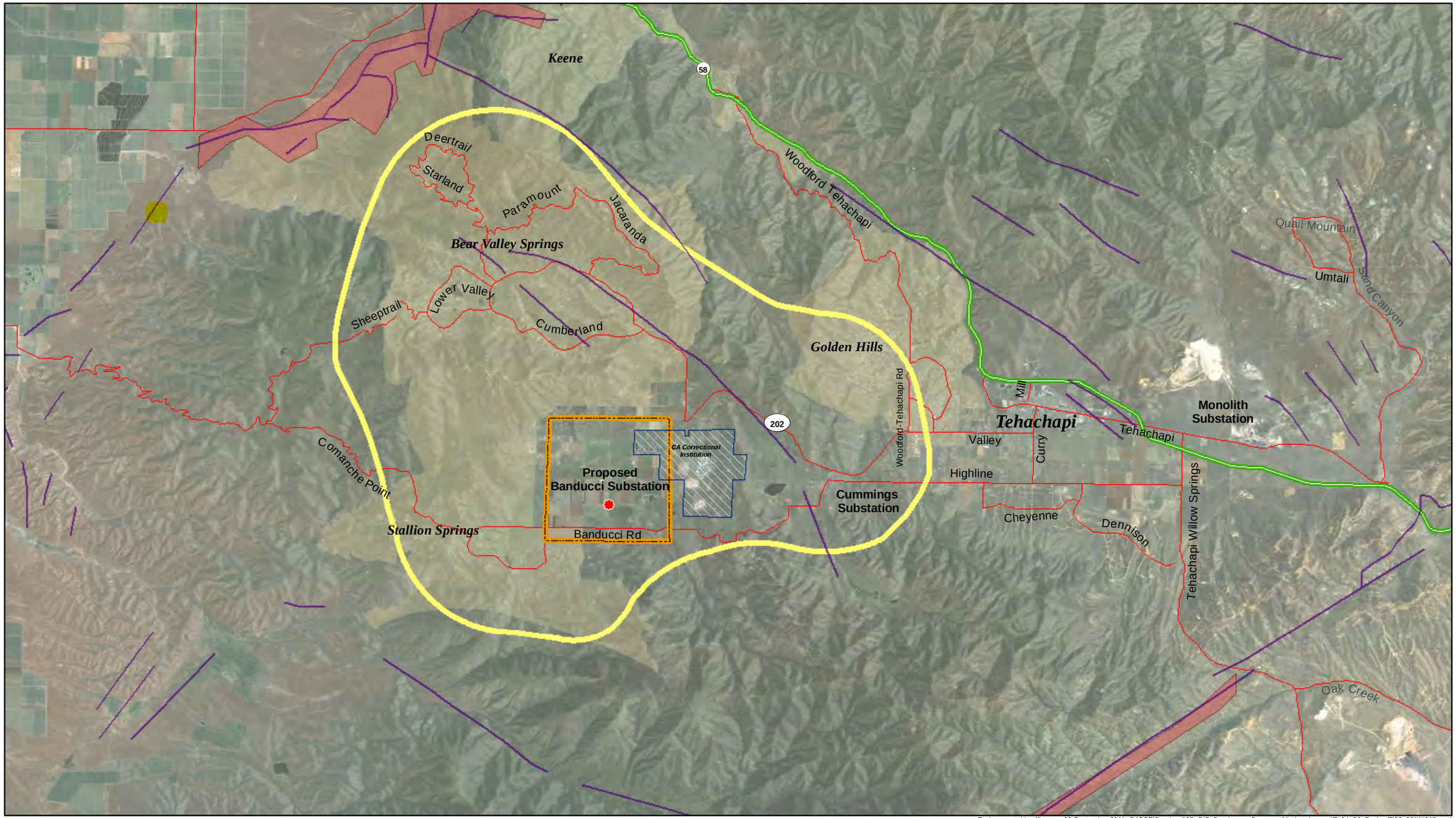
The Proposed Project would not be located within a currently designated State of California Earthquake Fault Zone. Based on review of existing geologic information, no known active fault zone crosses the Proposed Project. The potential for surface rupture resulting from the movement of the nearby major faults is unknown with certainty but is considered low.

Table 4.6-1: Major Active Faults in the Vicinity of the Proposed Project

Fault Name	Approximate Distance from Proposed Banducci Substation Site	Approximate Distance from Nearest Telecommunications Facilities	Type of Fault
White Wolf Fault	9.7 miles northwest	8.5 miles northwest	Active left-lateral reverse fault
Garlock Fault	9 miles south	4.3 miles south	Active left-lateral strike-slip fault

SOURCE: California Geological Survey, 2007

The secondary effects of seismic activity include soil liquefaction, differential settlement and ground lurching, lateral spreading, landslides, earthquake-induced flooding, and seiches. Site-specific potential for each of these seismic hazards is discussed in the following sections.



Environmental Intelligence. 26 September 2011. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_06_Faults_EI03_20111212.mxd

- Proposed Banducci Substation
- Substation Study Area
- Banducci Electrical Needs Area
- Faults
- Alquist-Priolo Fault Zone
- CA Correctional Institution

N W E S

0 2.5 5 Miles

Figure 4.6: Faults in the Proposed Project Vicinity

Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Liquefaction

Liquefaction is defined as the phenomenon in which a soil mass suffers a substantial reduction in its shear strength due to the development of excess pore pressures. During earthquakes, excess pore pressures may develop in saturated soil deposits as a result of induced cyclic shear stresses, resulting in liquefaction. Soil liquefaction occurs in submerged granular soils during or after strong ground shaking. The estimated depth to groundwater beneath the proposed Banducci Substation site is over 50 feet below ground surface (bgs). Groundwater levels in the Tehachapi area have been encountered at 71 feet bgs (DWR, 2004). Based on available data for the proposed Banducci Substation site and Southern California Edison's (SCE's) previous work along the telecommunications facilities (which would be located within the Tehachapi area), the Proposed Project would not be considered susceptible to liquefaction.

Differential Settlement and Ground Lurching

Seismically induced differential settlement is the uneven settling of material that could result from the effects of liquefaction. The proposed telecommunications facilities would be installed along existing SCE infrastructure that has withstood seismic events. The potential for significant differential settlement at the Proposed Project during earthquakes is considered to be low due to the low potential for liquefaction. Ground lurching is the horizontal movement of soil, sediment, or fill due to strong ground motions during an earthquake. The potential for ground lurching during earthquakes is considered to be minimal (USDA, 2012).

Lateral Spreading

Seismically induced lateral spreading involves lateral movement of earthen materials due to ground shaking. It differs from a slope failure in that ground failure involving a large movement does not occur due to the flatter slope of the initial ground surface. Lateral spreading is characterized by near-vertical cracks with predominantly horizontal movement of the soil mass involved over the liquefied soils towards an open face. The potential for lateral spreading is considered low for the Proposed Project.

Landslides

Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes. The site topography is relatively level, and the absence of nearby slopes precludes any slope stability hazards. The potential for seismically induced landslides is considered low for the Proposed Project.

Earthquake-Induced Flooding

Earthquake-induced flooding is flooding caused by failure of dams or other water-retaining structures as a result of earthquakes. The Federal Emergency Management Agency (FEMA) has designated the proposed Banducci Substation site as within Zone X, which denotes areas

containing a minimal flood hazard (FEMA, 2011). The only identified risk of earthquake-induced flooding would be in the event that the Brite Valley Dam fails (Kern County, 2010). However, if the Brite Valley Dam were to fail, the proposed Banducci Substation site would likely be unaffected as the site is located approximately 0.5 mile south of the extent of the dam inundation area identified in the Greater Tehachapi Area (GTA) Specific and Community Plan (GTASCP; Kern County, 2010).

Seiches

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. Although Brite Lake and several small pond-like areas are located near the Proposed Project Study Area, there are no large bodies of water near the site. As such, the potential for seiches affecting the proposed Banducci Substation site is considered low.

4.6.2 Regulatory Setting

The regulatory framework discussed below in this section identifies the federal, State, regional, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and would be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to geology and soils.

4.6.2.1 Federal

Clean Water Act

The Federal Clean Water Act (CWA) establishes requirements regarding discharges of pollutants into the waters of the United States and establishes quality standards for surface waters. Section 402 of the CWA establishes a framework for regulating municipal and industrial storm water discharges under the National Pollutant Discharge Elimination System (NPDES) storm water program. The Environmental Protection Agency (EPA) has authorized the local Regional Water Quality Control Boards (RWQCBs) to implement this program.

4.6.2.2 State

California Building Code

The Proposed Project is subject to the applicable sections of the California Building Code (CBC), which is administered by the California Building Standards Commission. The Building Department for Kern County is responsible for implementing the CBC for the Proposed Project.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo (AP) Earthquake Fault Zoning Act was enacted by the State of California in 1972 to mitigate the hazard of surface faulting to structures planned for human occupancy and other critical structures. The State has established regulatory zones, known as Earthquake Fault

Zones and often referred to as AP zones, around the surface traces of active faults and has issued Earthquake Fault Zone Maps to be used by government agencies in planning and reviewing new construction. In addition to residential projects, structures planned for human occupancy that are associated with industrial and commercial projects are of concern. The Proposed Project would not be located within an AP fault zone, and there are no proposed structures planned for human occupancy; therefore, the AP Earthquake Fault Zoning Act does not apply to the Proposed Project. However, the AP zone maps were reviewed as a reference for the locations of known active faults near the Proposed Project.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6) directs the California Geological Survey (CGS) of the Department of Conservation to identify and map areas prone to liquefaction, earthquake-induced landslides and amplified ground shaking. The purpose of this program is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards. Seismic Hazard Zone Maps that identify zones of required investigation are generated as a result of the program. Cities and counties are then required to use the seismic hazard zone maps in their land use planning and building permit processes. The Proposed Project would be located in an area that has not yet been mapped as part of the Seismic Hazards Mapping Act.

4.6.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

The Kern County General Plan has provisions that state that areas within the AP Special Study Zone and other recently active faults shall be designated with Map Code 2.1 (Seismic Hazard) and areas of down-slope ground movement shall be designated with Map Code 2.2 (Landslide; Kern County, 2009). The Kern County General Plan outlines the policy that aims to reduce to potential for exposure of residential, commercial, and industrial development to hazards of landslide, land subsidence, liquefaction, and erosion.

Greater Tehachapi Area Specific and Community Plan

The GTA is a term used to describe the collection of unincorporated communities located in eastern Kern County along State Route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted the GTASCP that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

Areas considered high risk for liquefaction due to soil types and geology within the GTA are designated with the overlay Map Code 2.7 (Liquefaction Risk Areas) in the GTASCP. Areas within the fault zones are designated with the overlay Map Code 2.1 (Seismic Hazard).

Department of Building and Safety Requirements

The Proposed Project would be subject to Kern County's building and safety requirements. The Kern County Code of Building Regulations requires a grading permit from the building official for any grading activity, subject to certain specific exemptions. Under the Kern County code, grading activities over 2,000 cubic yards must be performed in accordance with the approved grading plan prepared by a civil engineer or architect, and shall be designated as "engineered grading."

4.6.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving (1) 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); (2) strong seismic ground shaking; (3) seismic-related ground failure, including liquefaction; or (4) landslides?

- Result in substantial soil erosion or the loss of topsoil?

- 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?

- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

4.6.4 Impact Analysis

The geology and soils impact analysis for this PEA was evaluated based upon a review of the Kern County General Plan (Kern County, 2009), GTASCP (Kern County 2010), and the Soil Resource Report (2012), as well as other relevant sources.

Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving (1) 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); (2) strong seismic ground shaking; (3) seismic related ground failure, including liquefaction; or (4) landslides?

Construction Impacts

Less Than Significant Impact. The Proposed Project would not be located on an Alquist-Priolo Earthquake Fault Zone. The nearest designated Alquist-Priolo Earthquake Fault Zones are associated with the White Wolf and Garlock Faults, more than 9 miles northwest and south of the proposed Banducci Substation site, respectively. These two faults are located approximately 8.5 miles northwest and approximately 4.3 miles south of the proposed telecommunications facilities, respectively. Therefore, the potential for surface rupture at the site due to fault-plane displacement propagating to the ground surface during the design life of the Proposed Project is considered low.

Although the Proposed Project could be subjected to strong ground shaking in the event of an earthquake, this hazard is common in Southern California and the effects of ground shaking on the structures would be mitigated by proper engineering design and construction in conformance with current building codes and engineering practices. As discussed previously, the Proposed Project Study Area is not considered susceptible to liquefaction, and the potential for landslides is considered low due to the relatively level topography of the Proposed Project Study Area and the lack of nearby slopes.

Therefore, exposure of construction personnel or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic activity or landslides, during construction of the Proposed Project is less than significant.

Operation Impacts

Less Than Significant Impact. As discussed in construction impacts, the Proposed Project would not be located on an Alquist-Priolo Earthquake Fault Zone. Therefore, the potential for surface rupture at the site due to fault plane displacement propagating to the ground surface during the design life of the Proposed Project is considered low. In addition, the proposed Banducci Substation would be unstaffed, and the structures associated with the Proposed Project would not be utilized for human occupancy.

As previously noted, although the Proposed Project could be subjected to strong ground shaking in the event of an earthquake, this hazard is common in Southern California and the effects of ground shaking on the structures can be mitigated by proper engineering design and construction in conformance with current building codes and engineering practices. The proposed Banducci Substation structures would be designed consistent with California Building Code and the Institute of Electrical and Electronic Engineers 693, Recommended Practices for Seismic Design of Substations; and transmission/subtransmission facilities would be designed consistent with General Order 95, which has requirements that incorporate seismic loading into engineering design. Therefore, impacts related to strong seismic ground shaking would be less than significant.

As discussed previously, the Proposed Project would not be considered susceptible to liquefaction, and the potential for landslides is considered low due to the relatively level topography of the Proposed Project site and the lack of nearby slopes.

Therefore, exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic activity or landslides, during operation of the Proposed Project is less than significant.

Would the project result in substantial soil erosion or the loss of topsoil?

Construction Impacts

Less Than Significant Impact. During construction, loss of topsoil and erosion could result from construction activities, including the operation of heavy machinery on unimproved roadways, grading activities, excavation, drilling, or wind or water erosion of stockpiled fill/excavated materials at staging areas or laydown areas. Preparation of the staging areas may result in the loss of topsoil; however, the application of road base or crushed rock would serve to reduce erosivity. Use of existing access roads would also result in the loss of topsoil; however, compaction associated with that use would also serve to minimize erosion on roadways.

Erosion due to water runoff and wind would be minimized by the implementation of best management practices that would be provided in the Storm Water Pollution Prevention Plan (SWPPP) prepared for the Proposed Project.

During construction, water trucks and other measures would be used to minimize the quantity of fugitive dust created by construction. Implementation of the Worker Environmental Awareness Program (WEAP) as described in Section 3.10, Worker Environmental Awareness Training,

would provide site personnel with instructions on the individual responsibilities under the CWA, the project SWPPP, site-specific best management practices, and fugitive-dust control measures. Implementation of these best management practices measures would ensure that impacts related to soil erosion and loss of topsoil would be less than significant.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would not involve further grading and, since the proposed Banducci Substation would be unstaffed, it would require minimal vehicle traffic. Therefore, operation of the Proposed Project would result in less than significant impacts related to soil erosion or loss of topsoil.

Would the project 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?

Construction Impacts

Less Than Significant Impact. The GTASCP designates areas considered to be at a high risk of liquefaction with overlay Map Code 2.7 (Liquefaction Risk Areas) and much of the Cummings and Tehachapi Valleys are designated as Liquefaction Risk Areas. The majority of the proposed Banducci Substation site and the telecommunications routes would be designated as Liquefaction Risk Areas (Kern County, 2010). However, the geotechnical investigation report found that the proposed Banducci Substation site would not be considered susceptible to liquefaction because the estimated depth to groundwater based on previous investigation in the surrounding area beneath the proposed Banducci Substation site is over 50 feet bgs (SCE TDBU, 2011). The potential for lateral spreading would be low (USDA, 2012). Groundwater levels in the Tehachapi area have been encountered at 71 feet bgs (DWR, 2004).

No geotechnical investigation was conducted for the telecommunication routes. However, construction along the telecommunication routes would be limited to installing underground telecommunications facilities and replacing existing poles, all of which would be located within the existing SCE right-of-way (ROW). Based on the depth to groundwater, the risk of liquefaction or lateral spreading along the telecommunication routes would be low.

The topography of the Proposed Project Study Area is relatively level and the absence of nearby slopes precludes any slope stability hazards. Therefore, the potential for on or off site landslides is considered low.

No geotechnical investigation was conducted for the telecommunication routes. However, based on the depth to groundwater, it is anticipated that geologic units and soils in locations where construction would occur along the existing SCE ROWs would be stable and would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Operation Impacts

Less Than Significant Impact. As discussed in construction impacts above, the geotechnical investigation conducted in the areas surrounding the proposed Banducci Substation site did not identify unstable geologic units or soils. In addition, operation of telecommunications facilities would be limited to locations within the existing SCE ROW. As previously noted, it is assumed that geologic units and soils in the locations where poles and facilities are stable and would not result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.

Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Construction Impacts

Less Than Significant Impact. Expansive soils were not encountered during previous geotechnical investigations of the soils located in the Substation Study Area; therefore, it is unlikely that expansive soils are present at the proposed Banducci Substation site (USDA, 2012). Soils are expected to consist of silty sand, suggesting that the expansion potential of soils located within the proposed Banducci Substation site is very low (USDA, 2012). Soils along the existing telecommunications facilities contain structures and elements that would be comparable to the proposed elements and would be located within soil that is currently being used for telecommunications facilities. Therefore, the expansion potential of these soils is anticipated to be low, and construction impacts related to expansive soils are considered to be less than significant.

Operation Impacts

Less Than Significant Impact. As discussed in construction impacts above, neither the Substation Study Area nor the proposed telecommunications routes are likely to contain expansive soils (USDA, 2012). Therefore, operation impacts related to expansive soils are considered to be less than significant.

Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Construction Impacts

No Impact. No feasible sewer service option is currently available at the Proposed Project site. Approximately 90 percent of the existing lots within the Proposed Project Study Area are on septic systems (Kern County, 2010). During construction, the Proposed Project site would be equipped with a restroom consisting of a self-contained portable unit maintained by an outside service company. It is anticipated that the soils at the site would be capable of adequately supporting the anticipated waste disposal system. Therefore, during construction of the Proposed

Project, there would be no impact to geology and soils related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems.

Operation Impacts

Less Than Significant Impact. No feasible sewer service option is available. A stand-alone, permanent restroom would be installed within the substation perimeter wall, which would be equipped with a new holding tank. Based on the information already available (i.e., the composition of the soils in the area as well as the depth of the ground water table more than 50 feet bgs), it is anticipated that the soils at the proposed site would be adequate to support any wastewater disposal system that would be implemented (USDA, 2012). In addition, in accordance with the Standards and Rules and Regulations for Land Development in Kern County, a soils report regarding the feasibility of using an individual sewage disposal system in accordance with the standards of good public health and engineering practice would be required. Therefore, the ability of soils to support an on-site wastewater disposal system would be verified prior to the construction of the permanent restroom for the Proposed Project. The holding tank would be designed in accordance with the Standards and Rules and Regulations for Land Development for Sewage Disposal, Water Supply, and Preservation of Environmental Health. Therefore, operation of the Proposed Project would result in less than significant impacts related to soils incapable of supporting septic tanks.

4.6.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for geology and soils.

4.6.6 Alternative

Site Alternative B

Site Alternative B would be located approximately 0.5 mile north of the proposed Banducci Substation site on a parcel located on the northeast corner of Pelliser Road and the unimproved Highline Road in unincorporated Kern County. Site Alternative B is similar to the Proposed Project site in terms of topography. As with the Proposed Project site, Site Alternative B would not be located in an area with a known fault trace or in an earthquake-induced landslide hazard area and would have a potential for experiencing strong seismic ground shaking similar to that of the Proposed Project. Site Alternative B is similar to the Proposed Project Site in terms of soils. Therefore, the impacts with Site Alternative B to geology and soils would be less than significant.

4.6.7 References

California Department of Water Resources (DWR). 2004. *Tulare Lake Hydrologic Region-Tehachapi Valley West Groundwater Basin* (California Groundwater Bulletin 118) Sacramento, CA.

California Geological Survey. (2007). *Fault-Rupture Hazard Zones in California* (Special Publication 42). Sacramento, CA.

California Geological Survey. (1964). *Geologic Map of California, Bakersfield Sheet: California Division of Mines and Geology, 1:250,000 scale* (Olaf P. Jenkins Ed., compilation by Arthur R. Smith). Sacramento, CA.

Environmental Protection Agency. (1972). *Clean Water Act*. Retrieved September 22, 2011, from http://cfpub.epa.gov/npdes/cwa.cfm?program_id=45

Federal Emergency Management Agency (FEMA). (2011). *Flood Insurance Rate Maps - Item IDs: 06029C3225E and 06029C2813E.* Jessup, MD.

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, California. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdfKern County Public Health Services Department. (2010). *Standards and Rules and Regulations for Land Development for Sewage Disposal, Water Supply, and Preservation of Environmental Health*. Retrieved September 23, 2011, from http://psbweb.co.kern.ca.us/eh_internet/pdfs/land/landHotTopic/LandDevStan.pdf

Southern California Edison. (2011). *Geotechnical Investigation Report Banducci 66/12kV Substation*. Pomona, CA.

U.S. Department of Agriculture (USDA). (2012). *Custom Soil Resource Report for Kern County, California, Southeastern Part: Banducci Substation Study Area*. Washington, DC.

U.S. Geological Survey (USGS). *Mineral Resources Data Systems.* Bakersfield, CA. Retrieved July 19, 2011, from http://tin.er.usgs.gov/mrds/ and http://tin.er.usgs.gov/mrds/show-mrds.php?dep_id=10236382

4.7 Greenhouse Gas Emissions

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential greenhouse gas (GHG) emissions related impacts associated with the construction and operation of Southern California Edison's (SCE's) proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of GHG emission levels in the Proposed Project Study Area, evaluates the relevant GHG emission levels and characteristics of the surrounding area, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.7.1 Environmental Setting

The Proposed Project would be located in the Mojave Desert Air Basin, which encompasses over 20,000 square miles of California's desert. The Mojave Desert Air Basin consists of the eastern half of Kern County, the northern desert portion of Los Angeles County, most of San Bernardino County, and eastern Riverside County. The eastern portion of Kern County where the Proposed Project would be located is regulated by the Eastern Kern Air Pollution Control District (EKAPCD).

Greenhouse gas (GHG) emissions refer to a group of emissions that are generally believed to affect global climate conditions (TAHA, 2012). The "greenhouse effect" compares the Earth and the atmosphere surrounding it to a greenhouse. In a greenhouse, the sun's heat is trapped in order to regulate the temperature within the greenhouse. Like in a greenhouse, GHGs within the atmosphere trap heat from the sun and help to regulate the Earth's surface temperature. GHGs, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), keep the average surface temperature of the Earth close to 60 degrees Fahrenheit (°F). Without the greenhouse effect, the Earth would be a frozen globe with an average surface temperature of about 5°F (TAHA, 2012). However, an excess of GHGs in the atmosphere can cause global climate change by raising the Earth's temperature.

In addition to CO_2, CH_4, and N_2O, GHGs include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and water vapor. Of all the GHGs, CO_2 is the most abundant pollutant that contributes to climate change through fossil fuel combustion (TAHA, 2012). CO_2 comprised 83.3 percent of the total GHG emissions in California in the year 2002 (TAHA, 2012). Other GHGs are less abundant but have higher global warming potential than CO_2. To account for this higher potential, emissions of other GHGs are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e (TAHA, 2012). The CO_2e of CH_4 and N_2O represented 6.4 and 6.8 percent, respectively, of the 2002 California GHG emissions (TAHA, 2012). In this same year, other high global warming potential gases represented 3.5 percent of these emissions (TAHA, 2012). In addition, there are a number of human-made pollutants, such as carbon

monoxide (CO), nitrogen oxides (NO_X), nonmethane volatile organic compounds (VOC), and sulfur dioxide (SO_2), that have indirect effects on terrestrial or solar radiation absorption by influencing the formation or destruction of other relevant climate change gas emissions (TAHA, 2012).

Currently, six GHGs are regulated by the federal and State government: methane (CH_4), carbon dioxide (CO_2), hydrofluorocarbons (HFCs), nitrous oxide (N_2O), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). The California Air Resources Board (CARB) also includes nitrogen trifluoride (NF_3) in its inventory of monitored GHGs in California (CARB, 2012).

4.7.2 Regulatory Setting

4.7.2.1 Federal

Federal Clean Air Act

The Federal Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to define national standards to protect U.S. public health and welfare. The Federal CAA has regulation for GHG emissions through components including rules for permits under the New Source Review (NSR) and title V operating permits programs. There are currently no federal regulations that set ambient air quality standards for GHGs.

4.7.2.2 State

Assembly Bill 32, Global Warming Solutions Act of 2006

Assembly Bill (AB) 32, Global Warming Solutions Act, was signed by Governor Arnold Schwarzenegger in September 2006. AB 32 requires a statewide commitment and effort to reduce GHG emissions to 1990 levels by 2020 (25 percent below business as usual). To effectively implement the 2020 cap, AB 32 requires the CARB to develop appropriate regulations and to establish a mandatory reporting system to track and monitor GHG emission levels from stationary sources (CARB, 2011).

This bill is the first statewide policy in the United States to mitigate GHG emissions and includes penalties for noncompliance. As with the goals and targets set by other GHG emissions–related actions taking place at the regional and international levels, AB 32 sets precedence in requiring an inventory and reduction of GHG emissions in the State. In passing AB 32, the State legislature has acknowledged that global warming and related effects of climate change are environmental issues that should be regulated.

California Clean Air Act

The California CAA of 1988 requires all air pollution control districts in the State to work to achieve and maintain State ambient air quality standards by the earliest practicable date and to develop plans and regulations specifying how they will meet this goal. On April 2, 2007, the Supreme Court ruled in *Massachusetts, et al. v. Environmental Protection Agency, et al.* (549

U.S. 1438; 127 S. Ct. 1438) that the Federal CAA gives the U.S. EPA the authority to regulate the emissions of GHGs, including CO_2, CH_4, N_2O, and fluorinated gases, such as HFCs, PFCs, and SF_6. This ruling thereby legitimized GHGs as air pollutants under the Federal and State CAAs (U.S. Supreme Court, 2007).

California Senate Bill 97

California Senate Bill (SB) 97, as approved by Governor Arnold Schwarzenegger on August 24, 2007, is designed to work in conjunction with the State CEQA Guidelines and AB 32. Pursuant to the State CEQA Guidelines, the Office of Planning and Research (OPR) is required to develop proposed guidelines for the implementation of CEQA by public agencies. Pursuant to AB 32, the CARB is required to monitor and regulate emission sources of GHGs that cause global warming in order to reduce GHG emissions.

Although SB 97 exempts transportation projects funded under the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, and projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006, it would apply to any environmental documents, including an environmental impact report, a negative declaration, a mitigated negative declaration, or other documents required by CEQA that have not been certified or adopted by the lead agency by the date of the adoption of the SB 97 regulations.

California Senate Bill 375

Approved by Governor Arnold Schwarzenegger in 2008, SB 375 directs the CARB to set regional targets for reducing GHG emissions. SB 375 came about out of the recognition that the single largest source of GHGs in California is emissions from passenger vehicles and that, in order to reduce those emissions, vehicle-miles traveled (VMTs) must be reduced. SB 375 requires metropolitan planning organizations (MPOs) to include "sustainable communities strategies" in their regional transportation plans (RTPs) for the purpose of complying with the goal of AB 32 to reduce GHG emissions down to 1990 levels by 2020 (CARB, 2006).

4.7.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

4.7.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

4.7.4 Impact Analysis

Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The EKAPCD has not formally adopted recommendations or official guidance to evaluate the significance of GHG emissions for projects within the Mojave Desert Air Basin in which the EKAPCD is not the lead agency. The EKAPCD has adopted an addendum to their EKAPCD CEQA Guidelines, *Addressing GHG Emission Impacts for Stationary Source Projects When Serving as the Lead CEQA Agency*. The recommended threshold for GHG emissions is 25,000 tons per year of CO2e.

In addition, the South Coast Air Quality Management District (SCAQMD) has adopted a more conservative interim operational significance threshold of 10,000 metric tons of CO2e per year for stationary sources (SCAQMD, 2008). Given the Proposed Project site's proximity to the SCAQMD, and to implement the most conservative approach, this analysis applies the SCAQMD's significance threshold.

Construction Impacts

Less Than Significant Impact. Construction of the proposed Banducci Substation, proposed subtransmission poles, and proposed telecommunications facilities would take up to 12 months to complete. During construction, large equipment would be used within the Proposed Project Study Area and at the proposed Banducci Substation site. Construction-related activities would occur on approximately 34.7 acres within the Proposed Project Study Area.

GHG emissions were calculated for construction activity and on-road mobile vehicle operations in the Air Quality Report for the Proposed Project (TAHA, 2012). Table 4.7-1: Estimated Annual Greenhouse Gas Emissions, shows that the Proposed Project would be expected to result in a total annual emission of 1,072 metric tons of CO_2e.

As noted above, the SCAQMD's GHG significance threshold is intended for long-term operational GHG emissions. However, the SCAQMD has developed guidance for the determination of significance of GHG construction emissions that recommends that total emissions from construction be amortized over 30 years and added to operational emissions and then compared to the applicable significance threshold (SCAQMD, 2008). This analysis of the Proposed Project applies SCAQMD's guidance with regard to the assessment of construction-related GHG emissions. The Proposed Project's total GHG emissions (1,072 metric tons per year) amortized over 30 years is approximately 36 metric tons per year. Neither the total project construction CO_2e emissions nor the amortized construction CO2e emissions would exceed the 10,000 CO_2e threshold.

Table 4.7-1: Estimated Annual Greenhouse Gas Emissions

Construction Phase	Carbon Dioxide Equivalent (Metric Tons / Year)
Construction	
Banducci Substation Construction	568
Distribution Gateway Installation	28
Subtransmission Line Segment Installation	318
Telecommunications Construction	157
Total Construction Emissions	**1,072**
Amortized Construction Emissions[1]	**36**
Operations	
SF6 Leakage	**8**
Mobile Sources	**<1**
Total Operational Emissions	**9**
Total Annual GHG Emissions	**45**
Significance Threshold	**10,000**
Exceed Threshold?	No

NOTES: [1] The South Coast Air Quality Management District recommends annualizing construction emissions over 30 years in the GHG analysis.
SOURCE: TAHA, 2012

Construction-related impacts related to GHGs would be expected to be less than significant due to the short duration of construction-related activities and the relatively small size of the construction area.

Operation Impacts

Less than Significant Impact. Some fuel combustion in motor vehicles used during routine inspection, maintenance, and testing of the proposed Banducci Substation and subtransmission lines is expected. However, any such emissions would be a de minimis source of GHGs during the operation of the Proposed Project. Further, new circuit breakers installed at the proposed Banducci Substation and gas switches installed in the proposed distribution getaways would be insulated with SF_6. Leakage of SF_6 from the circuit breakers during operation of the Proposed Project would also generate GHG emissions. GHG emissions from SF_6 leakage were calculated by multiplying the amount of SF_6 contained in new circuit breakers and gas switches by the estimated annual leakage rate. The estimated annual emissions of greenhouse gases from the operational activities are 9 metric tons of CO_2e per year primarily from SF_6 leakage (please see Appendix C, Air Quality Calculations, for details). The annual emission of 9 metric tons of CO2e is substantially below the 10,000 CO2e threshold.As a result, operation of the Proposed Project would not be expected to generate GHG emissions, either directly or indirectly, that may have a significant impact to the environment.

Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Construction Impacts

No Impact. Construction of the Proposed Project would be consistent with the policies, plans, and regulations for reducing GHG emissions. The Proposed Project would incorporate best management practices and other standard SCE practices, such as reducing the idle time of construction vehicles, that are consistent with the requirements and intentions of the federal, State, and local plans, polices, and regulations, including Rule 401, the Kern County General Plan, and the GTASCP as described earlier in this section. Construction activities would not be expected to consume a substantial amount of energy that would result in a conflict with policies that serve to reduce GHG emissions through a reduction in energy consumption. As such, there would be no anticipated construction-related impacts related to the potential for the Proposed Project to conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Operation Impacts

No Impact. Operation of the Proposed Project would be consistent with the policies, plans, and regulations for reducing GHG emissions. The proposed Banducci Substation would be unstaffed and would not require frequent vehicle travel to the site. However, the operation and maintenance activities for the Proposed Project would be conducted in a manner consistent with SCE practices, such as reducing the idle time of vehicles used at the site (as noted above). As with construction, the operation and maintenance activities for the Proposed Project would also

be consistent with the requirements and intentions of the federal, State, and local plans, polices, and regulations, including Rule 401, the Kern County General Plan, and the GTASCP as described earlier in this section.

SCE has developed SF_6 Gas Management Guidelines that require proper documentation and control of SF_6 gas inventories, whether in equipment or in cylinders. Inventories are documented on both a quarterly and a yearly basis. SCE assumes that any SF_6 gas that is purchased and not used to fill new equipment is needed to replace SF_6 gas that has inadvertently leaked from equipment already in service. This assumption forms the basis for SCE to track and manage SF_6 gas emissions. Currently, SCE voluntarily reports these emissions to the California Climate Action Registry, which was created by the California legislature to help companies track and reduce GHG emissions.

SCE has made a significant investment in not only improving its SF_6 gas management practices, but also in purchasing state-of-the-art gas handling equipment that minimizes SF_6 leakage. The new equipment has improved sealing designs that virtually eliminate possible sources of leakage. SCE has also addressed SF_6 leakage on older equipment by performing repairs and replacing antiquated equipment through its infrastructure replacement program. It is expected that the Proposed Project would have a minimal amount of SF_6 leakage as a result of the installation of state-of-the-art equipment and SCE's SF_6 gas management practices. Pursuant to its existing practices, SCE would reduce potential GHG impacts resulting from the Proposed Project to the greatest extent practicable.

As such, there would be no anticipated operational impacts related to the potential for the Proposed Project to conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

4.7.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for GHG emissions.

4.7.6 Alternative

Site Alternative B

Like the Proposed Project, Site Alternative B would be expected to result in less than significant impacts related to GHG emissions. Under Site Alternative B, the construction and operation scenarios, including the equipment, personnel, vehicles, and activities, would be similar to the Proposed Project. However, Site Alternative B would require the demolition of an existing structure, which would require an increased demand on the use of equipment and vehicles during construction, and consequently increased GHG emissions. This increase in emissions would not be expected to exceed the GHG emission thresholds established for the Proposed Project. The anticipated GHG emissions and related impacts associated with Site Alternative B would be expected to be less than significant.

4.7.7 References

California Air Resources Board (CARB). (2012). *California Greenhouse Gas Emission Inventory.* Sacramento, CA. Retrieved from http://www.arb.ca.gov/cc/inventory/inventory.htm

California Air Resources Board (CARB). (2011). *Assembly Bill* 32. Sacramento, CA. Retrieved from http://www.arb.ca.gov/cc/docs/ab32text.pdf

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Terry A. Hayes Associates (TAHA). (2012). *Banducci Substation Project Air Quality Report.* Culver City, CA.

U.S. Bureau of Mines. (1967). *Ringelmann Smoke Chart*. Washington, DC.

U.S. Supreme Court. 2 April 2007. *Massachusetts, et al., v. Environmental Protection Agency, et al.* 549 U.S. 1438; 127 S. Ct. 1438. Washington, DC.

4.8 Hazards and Hazardous Materials

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts pertaining to hazards and hazardous materials associated with the construction and operation of the proposed Banducci Substation and ancillary facilities (Proposed Project). In accordance with CEQA Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of the hazards and hazardous materials in the Proposed Project Study Area, evaluates the hazards and hazardous materials characteristics, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.8.1 Environmental Setting

The Proposed Project would be located primarily in a rural area that is defined by largely agricultural uses. The land use designations and activities surrounding the Proposed Project Study Area include agricultural, commercial, residential and industrial activities, among others. The proposed Banducci Substation site has a land use designation of Intensive Agriculture. However, site reconnaissance and a review of aerial and satellite images of the proposed Banducci Substation site over the past four years indicate that the land has not been recently used for agricultural purposes.

Hazardous Materials

Agricultural uses have been known to involve the use of pesticides, herbicides, and similar chemicals to regulate undesired elements that could be present or could disturb the commercial production of crops. As noted above, the proposed Banducci Substation site is not currently used for agriculture. However, given the land use designation of the site and the prevalence of agriculture surrounding the site, it is possible that pesticides, herbicides, or similar chemicals may have been used at the proposed Banducci Substation site and may have also been used within areas located along the proposed telecommunications routes.

There is an inactive mine, Barrett Pit Mine, located approximately 0.7 mile northwest of the proposed Banducci Substation site, although the Barrett Pit Mine would not be impacted by construction or operation of the Proposed Project. There are also several dry oil/gas wells located within the vicinity of the proposed Banducci Substation site. The closest well is dry and inactive and is located approximately 0.3 mile north of the proposed Banducci Substation site, but it would neither impact nor be impacted by the Proposed Project (EDR, 2011b; DOGGR, 2011). The Monolith Cement Plant is located approximately 0.4 mile northeast of the intersection of the Proposed Telecommunication Routes 1 and 2, and Lee Deposit, a prospect mine is located approximately 0.25 mile south of the proposed Telecommunications Route 1. The mines and wells located near the Proposed Project are discussed in further detail in Section 4.11: Mineral Resources, of this PEA (also see Figure 4.11-1: Mineral Resources Data).

Hazardous Materials Site Listing Status

The State Water Resources Control Board (SWRCB) maintains a Hazardous Substance Storage Container Database that contains records of the registered aboveground storage tanks (ASTs; EDR, 2011a). The California Department of Toxic Substances Control (DTSC) has a hazardous waste tracking database called HAZNET that maps and lists sites containing potentially toxic substances. The HAZNET database lists a site located approximately 0.8 mile north of the proposed Banducci Substation site as containing an unspecified aqueous solution (EDR, 2011a). This listed site is also the location of an underground storage tank (UST; EDR, 2011a). The HAZNET database also lists a site that is located roughly 0.5 mile north of the proposed Banducci Substation site as containing aged or surplus organics, which would be consistent with the current use of the site as a sod farm (EDR, 2011a). This sod farm site is also the location of Site Alternative B. There is only one hazardous waste or substance site as described under Government Code Section 65962.5: a former Chevron gas station site is listed as a leaking underground storage tank (LUST). This LUST is located approximately 0.5 mile south of the proposed Banducci Substation site along Banducci Road (EDR, 2011a). Another hazardous materials site listed by the SWRCB located less than 2 miles northeast of the proposed Banducci Substation site within the California Correctional Institution contains a permitted UST (SWRCB, 2011). The State Water Resources Control Board (SWRCB) GeoTracker database lists several closed LUSTs and permitted USTs near the east side of the State Route (SR) 202 (West Valley Boulevard) and Woodford Tehachapi Road (SWRCB, 2011). Additional storage tank sites are listed near existing poles along the proposed fiber optic telecommunications routes that would be replaced in association with the Proposed Project; however, none of the sites would be affected by the proposed telecommunications facilities or related components (SWRCB, 2011).

Schools and Airports

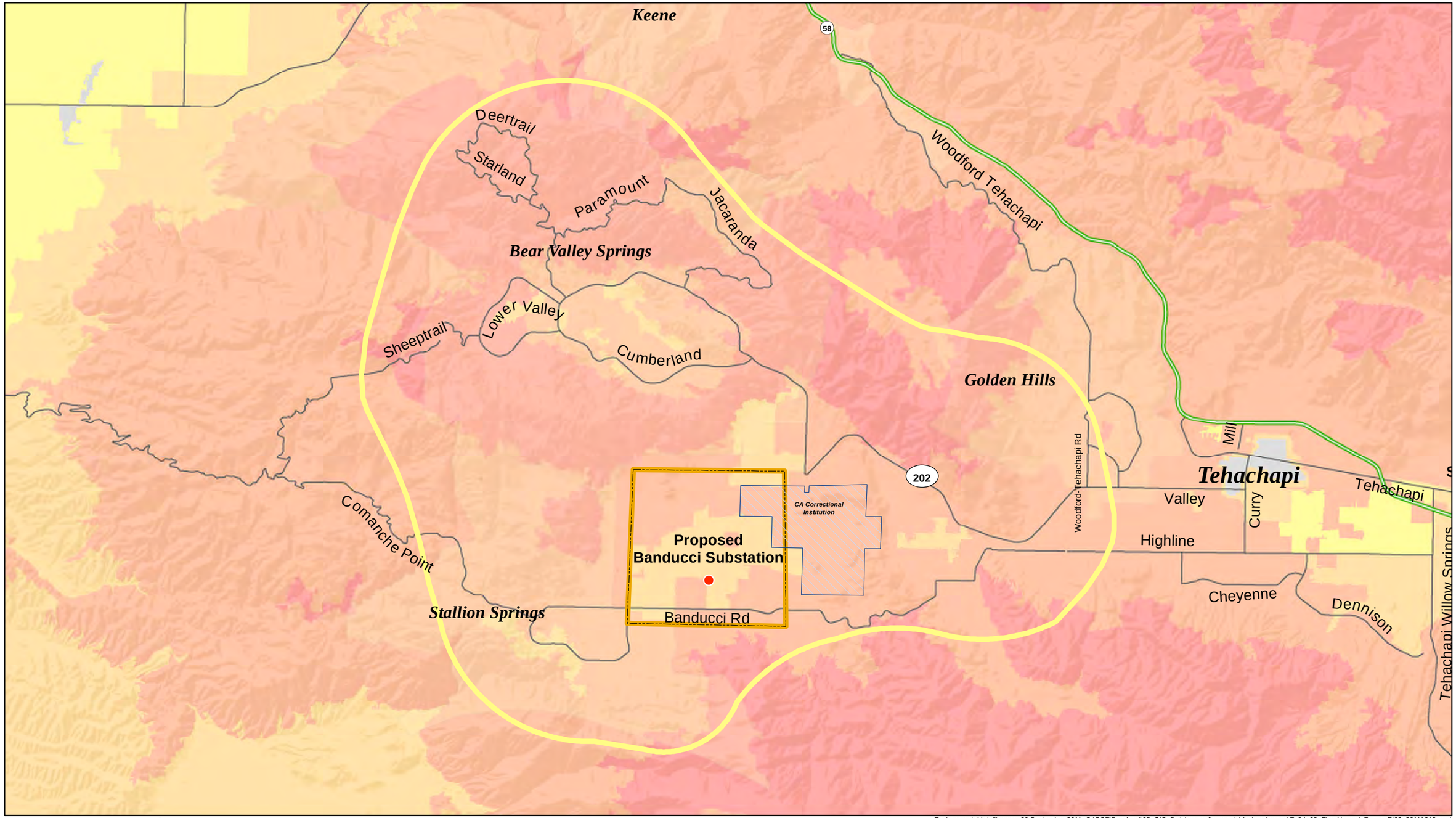
The closest school to the proposed Banducci Substation site is the Cummings Valley Elementary School, which is located approximately 2.6 miles to the northeast. There are no proposed schools that would be developed within 0.25 mile of the proposed Banducci Substation site (KCSS, 2011). There are three schools located within 0.25 mile of the proposed telecommunications routes. The nearest school, Monroe High School (Continuation) is located approximately 155 feet east of the Proposed Telecommunications Route 1. Jacobsen Middle School and Tompkins Elementary School are located roughly 242 feet south and 0.17 mile south of the Proposed Telecommunications Route 2, respectively.

There is a private landing airstrip at Psk Ranch, approximately 0.8 mile northeast of the proposed Banducci Substation site. Observations and site reconnaissance from recent visits to the Substation Study Area indicate that this airstrip does not appear to be currently used for aircraft takeoff and landing operations, and the site has been largely overtaken and populated by vegetation (Figures 4.1-2: Existing Context Photos, A-10 and A-11). The Tehachapi Municipal Airport is located more than 9 miles northeast of the proposed Banducci Substation site and roughly 300 feet north of the nearest section of Proposed Telecommunications Route 2. The Proposed Project would be located approximately 5 miles north of Black Mountain Supersonic Corridor. Edwards Air Force base is located more than 40 miles southeast of the proposed Banducci Substation site and is approximately 30 miles southeast of the nearest portion of

Proposed Telecommunications Route 1. The Proposed Project would not be located within an area that would be subject to military review (Kern County, 2010a).

Wildfire

The Proposed Project would be located in an area that is defined as having a moderate to high wildfire risk (CAL FIRE, 2006). The area surrounding the Proposed Project Study Area is largely agricultural land and is classified as having a moderate to high wildland fire risk (CAL FIRE, 2006, Figure 4.8-1: Fire Hazard Zones).



Environmental Intelligence. 26 September 2011. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_08_Fire_Hazard_Zones_EI03_20111213.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- Freeway / Major Highway
- Major Road / Minor Highway
- Banducci Electrical Needs Area
- CA Correctional Institution

Fire Hazard Zones

- Very High
- High
- Moderate
- Non-Wildland/Non-Urban
- Urban Unzoned

N W E S

0 1.5 3 Miles

Figure 4.8-1: Fire Hazard Zones
Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

4.8.2 Regulatory Setting

The regulatory framework discussed below in this section identifies the federal, State, regional, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to hazards and hazardous materials.

4.8.2.1 Federal

49 Code of Federal Regulations Part 77

Federal Regulation 49 Code of Federal Regulations (CFR) Part 77 establishes standards and notification requirements for objects affecting navigable airspace. Under 49 CFR Part 77, notices to the Federal Aviation Administration (FAA) are required for the following activities:

(1) Any construction or alteration of more than 200 feet in height above the ground level at its site.
(2) Any construction or alteration of greater height than an imaginary surface extending outward and upward at one of the following slopes:
   (i) 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each with at least one runway more than 3,200 feet in actual length excluding heliports.
   (ii) 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport with its longest runway no more than 3,200 feet in actual length, excluding heliports.
   (iii) 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport.
(3) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 15 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, or would exceed a standard of the thresholds outlined in specified in 49 CFR 77.
(4) When requested by the FAA, any construction or alteration that would be in an instrument approach area (defined in the FAA standards governing instrument approach procedures) and available information indicates it might exceed a standard specified in 49 CFR 77.
(5) Any construction or alteration on any of the airports (as specified in 49 CFR 77).

There are two notices that would be applicable to the Proposed Project: (1) the Notice of Proposed Construction or Alteration (7460-1), which notifies the FAA of proposed construction

or alteration that might affect navigable airspace (49 CFR part 77); and (2) the Notice of Actual Construction or Alteration (7460-2), which notifies the FAA of actual construction or alteration that might affect navigable airspace (49 CFR part 77). Due to the location of portions of Southern California Edison's (SCE's) existing and proposed telecommunications facilities, SCE would be subject to the notification requirements specified in 49 CFR 77.

Clean Water Act

The Clean Water Act (CWA; 33 U.S.C. Section 1251 *et seq.*) was enacted to protect the quality of waters of the United States. Specifically, the CWA establishes a structure for restoring and maintaining the chemical, physical, and biological integrity of waters of the United States by regulating the discharges of pollutants into the waters of the United States. The U.S. Environmental Protection Agency (EPA) oversees and implements the CWA. As part of the CWA, the EPA enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR Part 112 (40 CFR 112), which is intended to establish requirements designed to prevent the discharge of oil from facilities into navigable waters of the United States. The Oil Pollution Prevention regulation contains requirements for facilities to prepare a Spill Prevention, Control and Countermeasure (SPCC) Plan, as well as a plan to prepare for the response to a spill, release, or similar event (often referred to as a Facility Response Plan). The CWA also contains regulations, such as the National Pollutant Discharge Elimination System (NPDES), and seeks to preserve water quality by regulating pollution at the point source (U.S. EPA, 2011a). All construction activities that will disturb 1 acre or more must obtain a NPDES storm water permit and implement Stormwater Pollution Prevention Plans (SWPPP).

Spill Prevention, Control, and Countermeasure Rule (40 CFR 112)

The Federal Spill Prevention, Control, and Countermeasure Rule (40 CFR 112) was enacted to require response and cleanup after a spill occurs and prevent discharge of oil into navigable waters of the United States or adjoining shorelines. Facilities subject to the rule must prepare and implement a plan called an SPCC Plan.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA; 42 U.S.C. §6901 *et seq*.) regulates hazardous waste from the time that waste is generated through its management, storage, transport, and treatment, until its final disposal. Under RCRA, the EPA is required to identify and publish a list of hazardous wastes within 18 months and to set standards for the handling, transportation, and ultimate disposal of these wastes (U.S. EPA, 2011b). The EPA has established regulatory programs through the states. The EPA has authorized the Department of Toxic Substances Control DTSC to administer the RCRA program in California. Other provisions of the RCRA law include (U.S. EPA, 2011b):

- Requirements that all federal procurement agencies seek to reduce waste and recycle
- Requirements regarding the promotion of public participation and public involvement in meeting the federal and State compliance efforts

- Requirements for the completion of various reporting measures as well as the preparation of special studies and reports

The Proposed Project would require the storage and transport of materials that may require compliance with the RCRA program.

4.8.2.2 State

California Health and Safety Code Section 25150

California Health and Safety Code Section 25150(a) establishes processes for the standards and regulations required for the management of hazardous wastes to protect against hazards related to public health, domestic livestock, wildlife, or the environment. Specifically, this code grants DTSC the authority to adopt standards dealing with the management of hazardous wastes.

California Department of Toxic Substances Control Programs

DTSC regulates hazardous waste, cleans up existing contamination, and identifies ways to reduce hazardous waste produced in California. DTSC operates programs that respond to incidents; prevent releases; perform research such as evaluations; and enforce the appropriate handling, transport, storage, treatment, disposal, and cleanup of hazardous wastes. DTSC further tracks potentially hazardous waste that may be generated, transmitted, or present at sites through its Hazardous Waste Tracking System (HWTS).[1]

Department of Toxic Substances Control Hazardous Waste and Substances Sites (Cortese) List

Pursuant to California Government Code Section 65962.5(a), DTSC is required to compile and update as appropriate, but at the minimum annually, and submit to the Secretary for Environmental Protection, a list of all of the following:

(1) All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code

(2) All land designated as hazardous waste property or border zone property pursuant to Article 11 (commencing with Section 25220) of Chapter 6.5 of Division 20 of the Health and Safety Code

The list compiled by DTSC is often referred to as the Cortese list. DTSC is responsible for a portion of the information contained in the Cortese List. Government Code Section 65962.5 also requires the California EPA to develop an annual update to the Cortese list, and requires other State and local government agencies to provide additional hazardous material release information for the Cortese list. No portion of the proposed Banducci Substation site or of the proposed fiber optic telecommunications routes would be located on property included on the Cortese list.

[1] Information collected through the HWTS is presented in the intranet HAZNET.

Porter-Cologne Water Quality Act (California Water Code Section 13000 *et seq.*)

The Porter-Cologne Water Quality Act is a State law that provides a comprehensive water quality management system for the protection of California waters. The act designates the SWRCB as the ultimate authority over state water rights and water quality policy, and also established nine Regional Water Quality Control Boards (RWQCB) to oversee water quality on a day-to-day basis at the local and regional levels. The RWQCBs have the responsibility of granting NPDES permits and waste discharge requirements (WDRs) for storm water runoff from construction sites.

California Public Resources Code Sections 4292 and 4293

California Public Resources Code (CPRC) Section 4292 states that "any person that owns, controls, operates, or maintains any electrical transmission or distribution line…shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightening 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 a pole or tower (CPRC 4292)."

CPRC 4293 states

> Any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such area, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:
>
> (a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet
> (b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet
> (c) For any line which is operating at 110,000 or more volts, 10 feet
>
> In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard (CPRC 4293).

Red Flag Fire Warning and Weather Watches

Like CPRC Sections 4292 and 4293, red-flag warnings and fire-weather watches aim to prevent fire events and reduce the potential for substantial damage. When extreme fire weather or behavior is present or predicted in an area, a red-flag warning or fire-weather watch may be issued to advise local fire agencies that these conditions are present. The National Weather Service issues the red-flag warnings and fire-weather watches and the California Department of Forestry and Fire Protection (CAL FIRE) has provided safety recommendations, including clearing and removing vegetation, for preventing fires and ensuring the proper use of equipment.

Proposition 65

Proposition 65 requires businesses to notify Californians about significant amounts of chemicals that are released into the environment. The Office of Environmental Health Hazard Assessment (OEHHA) administers the Proposition 65 program. OEHHA, which is part of the California Environmental Protection Agency (Cal/EPA), also evaluates all currently available scientific information on substances considered for placement on the Proposition 65 list.

4.8.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County recognizes the importance of environmental and public health and has developed policies to protect the public from health and safety hazards in the Kern County General Plan (Kern County, 2009). Kern County encourages the development and upgrading of transmission lines and associated facilities (*e.g.,* substations) as needed to serve County residents and access the County's generating resources, insofar as transmission lines do not create significant hazards. Also, the County has policies that encourage enforcing and updating, as appropriate, all emergency plans as needs and conditions change, and that encourage ensuring new development of properties have sufficient access for emergency vehicles and for the evacuation of residents.

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along SR 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest,

Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

Regional Water Quality Control Board Basin Plans

Each RWQCB establishes WDRs, issues waste discharge permits, takes enforcement action against violators, and monitors water quality. The RWQCBs perform these actions through implementation of basin plans designed to protect ground and surface water quality through the development and enforcement of water quality objectives. Each basin plan identifies the relevant State, regional, and local polices related to their respective jurisdictional area.

Tehachapi Airport Master Plan Update

The Tehachapi Airport Master Plan Update is designed to provide the City of Tehachapi with a roadmap for the long-term development of the airport in a manner that is safe, meets long-term aviation needs, enhances the revenue-producing capability of the airport, is demonstrated to be financially sound, and meets environmental standards (City of Tehachapi, 2004).

4.8.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to result in impact to the following questions. Would the Proposed Project:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

- 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?

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

- 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?

- 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, result in a safety hazard for people residing or working in the project area?

- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area?

- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

- 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?

4.8.4 Impact Analysis

The hazards and hazardous materials–related findings provided in this section of the PEA are based upon a review of area maps, an area study and well search completed by Environmental Data Resources (EDR, 2011a-b); CAL FIRE (CAL FIRE, 2006); the geotracker system for the SWRCB (SWRCB, 2011); Central Valley and Lahontan RWQCB (Central Valley RWQCB, 2011, 2004; Lahontan RWQCB, 2005); site reconnaissance, and other relevant sources.

Would the Proposed Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would be anticipated to involve the transport, use, and disposal of hazardous materials, including hazardous liquid materials (such as mineral oil). It is anticipated that the use of these chemicals would be limited to specific activities and that these events would be more frequent during construction of the Proposed Project. The transport, use, and disposal of these hazardous materials would be done in compliance with the applicable laws, regulations, and guidelines designed to prevent accidents, injury, or other damages to the public or the environment. Additionally, SCE's SPCC Plan would provide guidance for managing hazards, hazardous materials, and wastes at the Proposed Project site. Implementation of the SPCC Plan would ensure that potential impacts would be less than significant. Therefore, construction of the Proposed Project would result in a less than significant impact associated with creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Operation Impacts

Less Than Significant Impact. During operation and maintenance, the Proposed Project would be anticipated to involve the transport, use, and disposal of limited quantities of hazardous materials, including hazardous liquid materials (such as mineral oil). It is anticipated that these events would be infrequent and would largely be associated with maintenance activities. Due to

the nature of the products that would be used, the Proposed Project would present a minimal impact to the public or the environment during transport, use, or disposal of any such materials. All transport of hazardous materials would conducted in compliance with applicable laws, rules and regulations, including the acquisition of required shipping papers, package marking, labeling, transport vehicle placarding, training, and registrations. As a result, operation of the Proposed Project would be expected to result in a less than significant impact associated with creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Would the Proposed Project 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?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would result in less than significant impacts with regard reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. While it is anticipated that construction-related activities would entail the use of hazardous materials, such as mineral oil, the most likely incidents involving hazardous materials would be minor spills or drips. Impacts from such incidents would be avoided or minimized by thoroughly cleaning up minor spills as soon as they occur, and these activities would not be expected to result in a foreseeable upset or accident condition that would impact personnel, the public, or the environment.

In addition, a site-specific construction Facility Response Plan, SWPPP, and SPCC Plan (see Chapter 3.0, Project Description, for more detail) would be prepared for the Proposed Project and would be implemented to ensure a quick response to any spills to avoid impacts to the environment. The SWPPP and SPCC Plan would set forth the locations for storage of hazardous materials during construction, as well as protective measures, notifications, and cleanup requirements for any incidental spills or other potential releases of hazardous materials. Any impacts that would result from an accidental release would be addressed through these plans. All personnel at the site would operate under SCE's safety requirements as outlined in SCE's Accident Prevention Manual and would be required to receive Workers Environmental Awareness Program (WEAP) training that would (1) address workers' responsibilities (as identified in Chapter 3.0, Project Description), (2) provide instruction on the Proposed Project SWPPP and site-specific best management practices, and (3) describe methods to avoid accidents and potential impacts. As such, the preparation of the SWPPP and SPCC Plan would ensure that the potential for construction of the Proposed Project to result in impacts from a foreseeable upset or accident would be less than significant.

Operation Impacts

Less Than Significant Impact. As with construction of the Proposed Project, operation and maintenance activities of the Proposed Project would require the use of hazardous materials. Although hazardous materials (*e.g.* mineral oil) would be used during maintenance activities at

the Proposed Project site, these items would be used in small quantities and would not be anticipated to result in a foreseeable upset or accidents that might adversely impact personnel, the public, or the environment. It is anticipated that these events would be infrequent and would largely be associated with maintenance activities. Due to the nature of the products that would be used, the Proposed Project would present a minimal impact to the public or the environment during transport, use, or disposal of any such materials. All transport of hazardous materials would be conducted in compliance with applicable laws, rules and regulations, including the acquisition of required shipping papers, package marking, labeling, transport vehicle placarding, training, and registrations. As a result, the potential for operation of the Proposed Project to result in impacts from a foreseeable upset or accident would be less than significant.

Would the Proposed Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Construction Impacts

Less Than Significant Impact. The proposed Banducci Substation would not be located within 0.25 mile of an existing or proposed school. As previously noted in this section, the nearest school to the proposed Banducci Substation site, Cummings Valley Elementary School, is located approximately 2.6 miles northeast of the proposed Banducci Substation site. Additionally, there are no proposed schools that would be developed within 0.25 mile of the proposed Substation Study Area. There are three schools located within 0.25 mile of the nearest proposed telecommunication facility. Although it would be anticipated that, during construction, crews would handle various items, including mineral oil, that may be considered hazardous, these items would be limited in use during activities associated with the proposed telecommunications facilities. SCE would prepare an SPCC Plan and incorporate best management practices from the SWPPP to ensure that construction of the Proposed Project would not result in substantial impacts associated with hazardous emissions or handling hazards or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

Operation Impacts

Less Than Significant Impact. It is anticipated that the operation and maintenance of the Proposed Project would require the infrequent use of items such as mineral oil or other materials that might be considered hazardous. However, as previously noted, proposed telecommunications facilities associated with the Proposed Project would be located within 0.25 mile of three schools. However, the SPCC Plan would be maintained for the Proposed Project throughout operation and as such, operation of the Proposed Project would be expected to result in less than significant impacts related to emissions or handling of hazards or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

Would the Proposed Project 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?

Construction Impacts

No Impact. The Proposed Project would not be located on a site that has been designated on the Government Code Section 65962.5 Cortese list (EDR, 2011a). Therefore, there would be no construction impacts related to the listing of this site pursuant to Government Code Section 65962.5 that would create a significant hazard to the public or the environment.

Operation Impacts

No Impact. As previously noted, the Proposed Project would not be located on a site that has been designated on the Government Code Section 65962.5 Cortese list (EDR, 2011a). Therefore, there would be no operational impacts related to the listing of this site pursuant to Government Code Section 65962.5 that would create a significant hazard to the public or the environment.

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, would the project result in a safety hazard for people residing or working in the project area?

Construction Impacts

Less Than Significant Impact. The proposed Banducci Substation site is not located within an airport land use plan or within 2 miles of a public airport. The nearest public airport, the Tehachapi Municipal Airport is located more than 9 miles northeast of the proposed Banducci Substation site and just north (roughly 300 feet) of the nearest section of the Proposed Telecommunications Route 2. Portions of the existing telecommunications facilities are included in the Tehachapi Airport Master Plan Update (City of Tehachapi, 2004). SCE removed the potential utility pole obstructions prior to completion of the Tehachapi Airport Master Plan Update in 2004. A subsequent threshold siting analysis was completed according to FAA methodology and California Department of Transportation guidelines and concluded that removal of the poles cleared the obstructions to airport elements (specifically Runway 29), and that the airport improvements (relocating Runway 29 to 375 feet from the runway end) would meet the FAA threshold siting criteria (City of Tehachapi, 2004).

Under the Proposed Project, the nearest proposed telecommunications pole would be placed nearly 500 feet away from Runway 29 and, as such, would be consistent with the existing approved siting criteria. However, as SCE's construction activities would occur within an area located in the Tehachapi Airport Master Plan Update, SCE would be required under 49 CFR Part 77 to notify the FAA to ensure that potential impacts would be less than significant. Incorporation of these efforts would ensure that construction of the Proposed Project would be expected to result in an impact that would be less than significant in relation to presenting a safety hazard for people residing or working in the Proposed Project Study Area.

Operation Impacts

Less Than Significant Impact. As previously noted, the proposed Banducci Substation would not be located within an airport land use plan and would be located more than 9 miles away from

the nearest public airport. The activities that would occur at the Proposed Project site would not be expected to interfere with a public airport or public use airport or create impacts that would result in a safety hazard for the people residing or working in the Proposed Project area. The proposed Banducci Substation would be unstaffed, maintenance personnel would only access the site periodically, and there are no residents residing within the immediate vicinity of the proposed substation; therefore, operation of the Proposed Project would not present a safety hazard for people residing or working in the Proposed Project area.

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?

Construction Impacts

No Impact. There are no active private airstrips within the vicinity of the Proposed Project. Although there is a listed private airstrip located approximately 0.8 mile northeast of the proposed Banducci Substation site, observations and site reconnaissance from recent visits to the Proposed Banducci Substation Study Area indicate that this airstrip appears to not currently be used for aircraft take-off and landing operations, and the site has been largely overtaken and populated by vegetation (Figures 4.1-2: Existing Context Photos, A-10 and A-11). These observations further confirmed that there are no people residing or working at or within the vicinity of the private airstrip. As such, construction of the Proposed Project would not be expected to result in a safety hazard for people residing or working in the Proposed Project Study Area.

Operation Impacts

No Impact. It is not anticipated that the private airstrip would be utilized during operation of the Proposed Project. As previously noted, the airstrip site at Psk Ranch has been abandoned and appears to be unused. As such, the activities that would occur at the Proposed Project site would not be expected to interfere with the private airstrip or create impacts that would result in a safety hazard for the people residing or working in the Proposed Project area. The proposed Banducci Substation would be unstaffed, maintenance personnel would only access the site periodically, and there are no residents residing within the immediate vicinity of the proposed substation. As such, operation of the Proposed Project would not be expected to result in impacts related to creating a safety hazard for people residing or working in the Proposed Project Study Area.

Would the Proposed Project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Construction Impacts

Less Than Significant Impact. The Proposed Project would be primarily located in a rural area. There is only one main access road, Pelliser Road, to the proposed Banducci Substation site. It is anticipated that Pelliser Road would serve as the main emergency access route to the site. During construction, the perimeter fencing and security gates may interfere with emergency vehicle access or personnel evacuation from the site. In addition, construction-related activities and the

presence of vehicles and equipment could potentially interfere with emergency access or response to the Proposed Project site or the few surrounding residences in the event of an emergency, such as a wildfire or chemical spill. To ensure that these potential impacts remain at a level that is less than significant and to ensure availability of emergency access to the Proposed Project site and the surrounding area during construction, SCE would coordinate with Kern County during the planning process prior to construction in order to ensure that the Proposed Project has considered the relevant Kern County ordinances and building codes in its design (such as, but not limited to, the following codes: 59 Chapter 17.32, Fire Code and 71 Chapter 17.34, Wildland-Urban Interface Code; Kern County, 2010b). As such, construction of the Proposed Project would be expected to be less than significant as it pertains to the potential impairment of adopted emergency response plans or emergency evacuation plans.

Operation Impacts

Less Than Significant Impact. During project operation, it is anticipated that the Proposed Project would continue to be accessible to emergency vehicles and responders. The proposed Banducci Substation would be unstaffed and its operation would not affect roadway access. During operation, the block wall and security gates at the proposed Banducci Substation may interfere with emergency vehicle access or personnel access to the site. However, SCE would advise Kern County of the proposed access road design during the planning process prior to construction to ensure that emergency access routes to the site remain adequate throughout the life of the Proposed Project. As such, operation of the Proposed Project would be expected to be less than significant as it pertains to the potential impairment of adopted emergency response plans or emergency evacuation plans.

Would the Proposed Project 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?

Construction Impacts

Less Than Significant Impact. The Proposed Project would be constructed in an area that has a moderate to high wildland fire risk (CAL FIRE, 2006). Figure 4.8-1: Fire Hazard Zones depicts the fire hazard threats within the Substation Study Area. The Proposed Project may pose a fire hazard if vegetation or other obstructions come into contact with energized electrical equipment. However, the Proposed Project would be constructed and maintained in a manner consistent with CPUC General Order 95 and CPUC General Order 165. Consistent with these and other applicable federal and State laws, SCE would maintain the area around the equipment clear of brush, thereby minimizing the potential for fire.

In addition, SCE also would implement standard fire prevention protocols when the National Weather Service issues a red-flag warning for the Proposed Project area. SCE would also cooperate with CAL FIRE, the California Office of Emergency Services, the U.S. Forest Service, and various city and County fire agencies in the Red Flag Fire Prevention Program, and complies with CPRC Sections 4292 and 4293 related to vegetation management in transmission line corridors. In addition, implementation of Applicant Proposed Measure (APM) HAZ-1 would

further reduce wildfire risks. As such, construction of the Proposed Project would be expected to result in less than significant impacts related to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires.

Operation Impacts

Less Than Significant Impact. As previously noted, the Proposed Project would be located in an area that has a moderate to high wildland fire risk (CAL FIRE, 2006). Consistent with these and other applicable federal and State laws, SCE would maintain an area of cleared brush around the equipment and would ensure that potentially flammable liquids or materials are properly sealed, used, stored, and disposed of. The proposed Banducci Substation would be unstaffed and any planned maintenance work would be halted in severe fire warning conditions. While there would be new structures at the proposed Banducci Substation site that may be exposed to risks, these risks would be less than significant.

The proposed fiber optic telecommunications facilities would be maintained in a manner comparable to that of the proposed Banducci Substation. As such, the Proposed Project would not be expected to expose workers to significant wildfire risks. As during construction, during operation SCE would continue to cooperate with CAL FIRE, the California Office of Emergency Services, the U.S. Forest Service, and various city and County fire agencies in the Red Flag Fire Prevention Program and would comply with CPRC Sections 4292 and 4293 related to vegetation management in transmission line corridors. As such, operation of the Proposed Project would be expected to result in less than significant impacts related to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires.

4.8.5 Applicant Proposed Measures

SCE has developed APMs to be incorporated into the Proposed Project to minimize the potential for the Proposed Project to result in significant impacts related to hazards and hazardous materials resources (Table 4.8-1: Applicant Proposed Measures).

Table 4.8-1: Applicant Proposed Measures

APM	Description
APM HAZ-1	**Fire Management Plan.** A Fire Management Plan would be developed by SCE prior to the start of construction.

4.8.6 Alternative

Site Alternative B

Impacts associated with Site Alternative B would be expected to be similar to those identified for the Proposed Project. However, Site Alternative B would be located on a site that is currently used as a sod farm and requires the use of various types of chemicals, including herbicides,

pesticides, fertilizers, and other chemicals or materials that are used to control the growth of grass and are not commonly used on other land uses. As a result, the site has been listed by the DTSC's HAZNET database as containing aged or surplus organics (EDR, 2011a). Development of Site Alternative B would require consideration for the workers during construction to avoid exposure to potentially harmful chemicals or materials. For Site Alternative B as with the Proposed Project, the risk of potential wildland fire hazards would present a potential threat to the new substation structure. Furthermore, hazardous materials, such as mineral oil, would be stored, used, and transported during construction and operation of Site Alternative B. However, as with the Proposed Project, this alternative would require the implementation APM HAZ-1 to ensure impacts would be less than significant. Site Alternative B is listed on the DTSC HAZNET database and consequently would be expected to result in greater impacts related to hazards and hazardous materials than those associated with the Proposed Project.

4.8.7 References

California Department of Conservation Division of Oil, Gas and Geothermal Resources (DOGGR). *California Oil and Gas Well Locations.* Retrieved September 19, 2011, from http://maps.conservation.ca.gov/doms/doms-app.html

California Department of Forestry and Fire Protection (CAL FIRE). (2006). *Fire and Resources Assessment Program.* Sacramento, CA.

California Department of Toxic Substances Control (DTSC). (2011). *DTSC: Who We Are and What We Do.* Retrieved September 6, 2011, from http://www.dtsc.ca.gov/InformationResources/DTSC_Overview.cfm

California Stormwater Quality Association. 2010. *Stormwater Best Management Practice (BMP) Handbooks / Portal.* Retrieved September 6, 2011, from http://www.cabmphandbooks.com/

Central Valley Regional Water Quality Control Board (Central Valley RWQCB). (2011 and 2004). *Central Valley Regional Water Quality Control Board Basin Plan.* Sacramento, CA.

City of Tehachapi. (2004). *Tehachapi Airport Master Plan Update.* Tehachapi, CA.

Environmental Data Resources (EDR). (2011a). *Area Study.* Milford, CT. *NOTE: the registered mailing addresses for the properties located in this rural area may differ from the mapped *actual* location of the materials identified in this report.

Environmental Data Resources (EDR). (2011b). *Well Search Report.* Milford, CT.

Environmental Intelligence, LLC. (2011). Site reconnaissance performed June 21 and August 10, 2011.

Kern County. (2010a). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2010b). *Code of Building Regulations.* Kern County, CA.

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kern County Superintendent of School (KCSS). (2011). *Tehachapi Unified.* Retrieved July 19, 2011, from: http://kcsos.kern.org/Research/Data/Maps/Tehachapi_Unified

Lahontan Regional Water Quality Control Board (Lahontan RWQCB). (2005). *Water Quality Control Plan for the Lahontan Region.* Victorville, CA.

State of California Water Resources Control Board (SWRCB). (2011). *GeoTracker*. Retrieved July 11, 2011, from http://geotracker.swrcb.ca.gov

U.S. Department of Agriculture (USDA). (2011). *Information for Law and Regulations.* Retrieved September 1, 2011, from http://www.usda.gov/wps/portal/usda/usdahome?navid=LAWS_REGS&navtype=SU

U.S. Environmental Protection Agency (U.S. EPA). (2011a). *Summary of the Clean Water Act*. Retrieved July 5, 2011, from http://www.epa.gov/lawsregs/laws/cwa.html

U.S. Environmental Protection Agency (U.S. EPA). (2011b). *Resource Conservation and Recovery Act*. Retrieved from http://www.epa.gov/aboutepa/history/topics/rcra/index.html

4.9 Hydrology and Water Quality

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to hydrology and water quality associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project). In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of hydrology and water quality in the Proposed Project Study Area, evaluates the hydrology and water quality characteristics, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.9.1 Environmental Setting

The Proposed Project would be located largely within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB; Region 5). A portion of the eastern-most project boundary, where existing poles would be removed or replaced, would be located within the jurisdictional area of the Lahontan RWQCB (Region 6). Water allocation for the Proposed Project and the surrounding area is delegated by the Tehachapi-Cummings County Water District (TCCWD). The TCCWD is located in the Tehachapi Mountains, east of the Southern San Joaquin Valley and encompasses approximately 266,000 acres in the Greater Tehachapi Area (GTA) (TCCWD, 2003). The TCCWD manages two primary sources of water for the GTA: (1) three basins that provide the groundwater supply to the Proposed Project site and surrounding areas, and (2) the State Water Project contract allocation (Kern County, 2010). The three groundwater basins include the Brite Valley, Cummings Valley, and Tehachapi Valley Basins. Table 4.9-1: Groundwater Basin Water Availability provides an overview of the groundwater availability in the basins serving the Proposed Project Study Area and the surrounding areas.

Table 4.9-1: Groundwater Basin Water Availability

Groundwater Basin	Safe Yield (acre-feet)	Allowed Pumping (acre-feet)	Current Production (acre-feet)[1]	Current Production of Safe Yield (%)	Dwelling Units Served	Unexercised Groundwater (acre-feet)
Brite Valley Basin	500	500	328	66	411	172
Cummings Valley Basin	4,090	4,090	3,958	97	4,066	132
Tehachapi Valley Basin (including City of Tehachapi)	5,500	5,524	5,127	93	4,277	397
Subtotals	**10,090**	**10,114**	**9,413**	**-**	**8,754**	**701**

NOTES:
1. 2008 production includes agricultural use.
2. Dwelling units are supplied from either the groundwater basins or imported State Water Project water or a combination of both.
3. Current production, dwelling units served, and unexercised groundwater values are based upon 2008 availability and production.

SOURCE: Kern County, 2010 (see Table 3-1: Substation Ground Surface Improvement Materials and Volumes)

Water services to the Proposed Project Study Area are currently supplied by the California Water Service Corporation – Antelope Valley District (formerly the Grand Oaks Water Company; Kern County, 2010). Water services in areas along the proposed telecommunications routes are currently provided by the California Water Service Corporation – Antelope Valley District and Golden Hills Community Services District (Kern County, 2010).

Groundwater

The proposed Banducci Substation would be located within the Cummings Valley Groundwater Basin (Kern County, 2010). This basin is bounded to the north by the Sierra Nevada Mountains and to the south by the Tehachapi Mountains (DWR, 2004). Well depths within the basin range from 64 to 540 feet below ground surface (bgs; DWR, 2004). As such, groundwater beneath the proposed Banducci Substation site is anticipated to be more than 50 feet bgs.

As previously noted, the local groundwater supply is available in three basins: the Brite Valley, Cummings Valley, and Tehachapi Valley Basins. There are several intermittent streams located in and surrounding the Substation Study Area as well as several perennial areas located near the proposed Banducci Substation site. As shown in Figure 4.9-1: Hydrology and Dam Floodplain Boundaries*,* the closest bodies of water consist of several small, perennial ponds located east of the proposed Banducci Substation site (the nearest area is less than 1 mile east) and Brite Lake, approximately 3 miles northeast of the proposed Banducci Substation site. Additionally, portions of a dam inundation area associated with the Brite Valley Dam are located approximately 1 mile north of the proposed Banducci Substation site (Kern County, 2010).

Flooding

The Federal Emergency Management Agency (FEMA) designates zoning for flood hazard areas. The proposed Banducci Substation site is located within Zone X (FEMA, 2011). The proposed telecommunications routes are located in areas that are designated as Zone X (FEMA, 2011). The Zone X designation is assigned to areas with a minimal flood hazard. This zonation means that the area where the proposed Banducci Substation and proposed telecommunications routes would be located have a moderate to low risk of inundation following a storm event. This area is outside of the 500-year flood level and is protected by a levee or dam from 100-year flood events (FEMA, 2011). Zone A is used to classify areas where no base evaluation has been determined. Areas designated as Zone A are located adjacent to the Proposed Project Study Area (FEMA, 2011). A majority of the Zone A designation near the Proposed Project Study Area is composed of perennial areas that are also designated by FEMA as special flood hazard areas, which are areas that are subject to inundation by a 100-year flood event (FEMA, 2011).

There are three dams located within the GTA: the Antelope Dam, the Blackburn Dam, and the Brite Valley Dam (Kern County, 2010). The Antelope Dam and the Blackburn Dam are relatively small in size and do not require inundation mapping because the potential for land areas to be inundated by these waters during a flood event is low or highly unlikely (Kern County, 2010 and USGS, 2012). However, the Brite Valley Dam is included in the Kern County

SKYLINE DR
HORIZON CT
TROTTER DR
SCHATZ RD
ROOST AV
LOG HOME WY
JACKS CT
BAILEY RD
CUMMINGS VALLEY RD
BEAR VALLEY RD
202 HWY
ROWE AV
ROBERTS AV
JENNA ST
YEARLING PL
KELSO DR
ASSAULT DR
CASTLE GATE DR
HARNESS DR
GIRAUDO RD
HAVEN LN
CAYLEY DR
SPRINKLE AV
SPINKLE CT
HIDDEN OAKS DR
PEGASUS ST
SECRETARIAT RD
BAUMBACH AV
EDWARD ST
PELLISER RD
TRACK VIEW DR
SASIA RD
CHANAC RD
HIGHLINE RD
CA
Brite Lake
ROBBY RD
DALE RD
EDWARD ST
BANDUCCI RD
PINEHURST PL
GLENEAGLE CT
ST ANDREWS DR
STALLION SPRINGS DR
RONNIE AV
Cummings Creek
SARIDA AV
OLD RANCH RD
AUGUSTA WY
SANTA ANITA ST
SULKY LN
HIALEAH DR
MAN O WAR DR
BOWIE ST
BOLD VENTURE DR
ACK ACK CT
CAVAN CT
CHURCHILL ST
BUCKPASSER DR
Comanche Creek

Environmental Intelligence. 15 February 2012. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_09_Hydrology_And_Floodplain_Boundary_EI02_20111213.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Dam Floodplain (Inundation Area)
- Road
- Intermittent Stream
- Artificial Flow Path
- Perennial Pond / Lake

N
W E
S

0 0.25 0.5 1 Miles

Figure 4.9-1: Hydrology and Floodplain Boundaries

Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

inundation mapping area. In the event of failure of the Brite Valley Dam, water stored in the dam would flow through Brite Valley before flowing into Cummings Valley, across State Route (SR) 202 near the entrance to the California Correctional Institute in the City of Tehachapi, then continuing southwest across Cummings Valley into Stallion Springs through a golf course area (Kern County, 2010). The Brite Valley Dam is 56 feet tall with a storage capacity of 1,820 acre-feet and a drainage capacity of 1.3 square miles (Kern County, 2010). As shown in Figure 4.9-1: Hydrology and Floodplain Boundaries, portions of a dam inundation area are located approximately 1 mile north of the proposed Banducci Substation site (Kern County, 2010).

Runoff

The Proposed Project's main source of runoff would be the proposed Banducci Substation site, which is located on the eastern side of Pelliser Road. Under the National Pollutant Discharge Elimination System (NPDES), Southern California Edison (SCE) would be required to obtain coverage under the Statewide Construction General Permit (CGP; Order No. 2009-009-DWQ as amended by 2010-0014-DWQ) from the Central Valley RWQCB, where the proposed Banducci Substation would be located, because construction of the Proposed Project would require more than 1 acre of ground disturbance. It is not anticipated that SCE would obtain NPDES coverage for the small portion of telecommunications facilities that would occur within the Lahontan RWQCB, as the entire project would seek coverage under the Central Valley RWQCB. To acquire this permit, SCE would prepare a Storm Water Pollution Prevention Plan (SWPPP) that includes project information, design features, monitoring and reporting procedures, and best management practices (BMPs). The SWPPP would be prepared by a Qualified SWPPP Developer (QSD) and implemented by a Qualified SWPPP Practitioner (QSP) based on final engineering design, and would include all of the proposed Banducci Substation project components. The BMPs would include storm water runoff quality control measures, including boundary protection, dewatering procedures, and concrete waste management to ensure that potential runoff from the site is avoided or controlled.

It is anticipated that the Proposed Project would also be subject to the Post-Construction Storm Water Performance Standards of the CGP. The State Water Resources Control Board's Storm Water Program is also in the process of renewing the Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit Program. Under the MS4 Program, SCE would be required to develop and implement a storm water management program (SWMP) to reduce the contamination of storm water runoff.

The proposed telecommunications routes would remove and replace existing poles within the Central Valley and Lahontan RWQCB areas. During construction, less than 5 acres would be temporarily disturbed and less than one acre would be permanently disturbed. It is anticipated that the BMPs that SCE provides in the SWPPP for construction related activities would also address the telecommunications components of the Proposed Project.

Seiche, Tsunami, Mudflow

A seiche is a large wave generated by an enclosed body of water. This wave is typically the result of a ground-shaking event. As previously noted, the closest bodies of water include several small ponds located east of the proposed Banducci Substation site and Brite Lake, located approximately 3 miles northeast of the proposed substation site. These areas are located less than 1 mile south and approximately 200 feet south of the nearest portion of the Proposed Telecommunications Route 1. While the Proposed Project site is not located near an enclosed body of water, the proposed Banducci Substation site is located approximately 1 mile south of portions of the Brite Valley Dam inundation area. The proposed Banducci Substation site is also located more than 2.5 miles southeast of the Cummings Valley Fault Zone.

A tsunami is a wave that is generated in a large body of water by the movement of a fault or the ground. A tsunami wave typically comes from the ocean. The Proposed Project would be located more than 100 miles east of the Pacific Ocean and would not be affected by potential tsunamis.

Mudflows are a type of landslide caused by a combination of elements and factors including soil type and slope. The Proposed Project Study Area consists of relatively flat agricultural land with an average elevation of approximately 3,830 feet above mean sea level. Soils at the proposed Banducci Substation site, where new development would occur, are classified as loamy sand and sand deposits that have a low ability to hold water but may consist of more than 90-percent moisture resistant minerals (USDA, 1999).

Average annual rainfall within the Cummings Valley is between 10 and 14 inches (DWR, 2004).

4.9.2 Regulatory Setting

The regulatory framework discussed in this section identifies the federal, State, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process to determine the potential for the Proposed Project to result in significant impacts related to hydrology and water quality.

4.9.2.1 Federal

Clean Water Act

The Clean Water Act (CWA; as discussed in Section 4.8, Hazards and Hazardous Materials, of this PEA), was enacted in 1972 with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. Waters of the United States are regulated by the U.S. Army Corps of Engineers pursuant to Section 404 of the CWA (see Section 4.4, Biological Resources, of this PEA).The CWA includes requirements that each state set standards to protect, maintain, and restore water quality through the regulation of point source and certain nonpoint source discharges to surface water. The discharges are regulated by the Environmental Protection Agency's NPDES permit process.

National Pollutant Discharge Elimination System

The NPDES was established, per Section 402 of the 1972 CWA, in order to control discharges of pollutants from point sources. The CWA created a section of the act devoted to storm water permitting (Section 402), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The SWRCB issues both general permits and individual permits (such as Waste Discharge Requirements for projects) under this program. The SWRCB for California delegates much of its NPDES authority and administration to nine RWQCBs. The Proposed Project's NPDES permits are under the jurisdiction of the Region 5, Central Valley RWQCB and Region 6, Lahontan RWQCB. SCE would obtain NPDES coverage under the Statewide CGP (Order No. 2009-009-DWQ as amended by 2010-0014-DWQ) from the Central Valley RWQCB.

4.9.2.2 State

California Water Code §13260

California Water Code §13260 requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State, other than into a community sewer system, must submit a report of waste discharge to the applicable RWQCBs. Any actions related to the Proposed Project that would be applicable to California Water Code §13260 would be reported to the applicable RWQCB(s).

Porter-Cologne Water Quality Act

This act was enacted in 1969 and took effect in 1970. This act assigned the authority over State water rights to the SWRCB and established the nine RWQCBs. The SWRCB regulates surface waters and groundwater of the State through this act and the RWQCBs maintain the jurisdictional responsibility of implementing State and federal water quality measures, guidelines, and regulations on a regional level. As noted above, the Proposed Project would be located within the Region 5, Central Valley RWQCB and Region 6, Lahontan RWQCB.

4.9.2.3 Local

The CPUC General Order No. 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." As a public utility project that is subject to jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County recognizes the importance of water resources and has developed policies in the Kern County General Plan to ensure that the water quality standards are met for existing users and future development (Kern County, 2009).

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a Greater Tehachapi Area Specific and Community Plan (GTASCP) that sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

4.9.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the proposed project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the project:

- Violate any water quality standards or waste discharge requirements?
- 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
- 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 which would result in substantial erosion or siltation on site or off site?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on site or off site?

- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
- Otherwise substantially degrade water quality?
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- 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?
- Inundation by seiche, tsunami, or mudflow?

4.9.4 Impact Analysis

Potential impacts to hydrology and water quality associated with the Proposed Project were assessed with respect to field reconnaissance, the SWRCB, Central Valley RWQCB, Lahontan RWQCB, and Federal Emergency Management Agency (FEMA, 2011).

Would the project violate any water quality standards or waste discharge requirements?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would be completed in compliance with the established federal, State, and local water quality standards and these standards would apply to all related construction activities as well as storm water and waste discharge from the site during construction. As part of the CGP (Order No. 2009-009-DWQ as amended by 2010-0014-DWQ), the Proposed Project would be required to incorporate actions designed to regulate storm water discharge through the implementation of BMPs and other measures. These practices could include various project-specific measures that would be designed to ensure that the water quality standards and waste discharge requirements would not be violated and would be developed and implemented by a QSD and QSP, respectively, within the Proposed Project's SWPPP. Implementation of the SWPPP and associated BMPs would minimize impacts to water quality from erosion and accidental spills, and other potential water quality impacts during construction.

In addition, implementation of the Worker Environmental Awareness Plan, as described in Section 3.10, Worker Environmental Awareness Training, would provide site personnel with instruction on the individual responsibilities under the CWA, the Proposed Project's SWPPP and site-specific BMPs. As such, construction of the Proposed Project would be expected to result in

a less than significant impact related to violating any water quality standards or waste discharge requirements.

Operation Impacts

Less Than Significant Impact. Like the construction phase, operation of the Proposed Project would be completed in compliance with the established federal, State, and local water quality standards. During operation, effluent from the site would largely be limited to storm water discharge. As noted above, the Proposed Project would incorporate design features, BMPs and other related measures or practices during operation of the Proposed Project. Water quality within the Proposed Project Study Area would be further protected by the implementation of the SWMP and the Spill Prevention Control and Countermeasure (SPCC) Plan described in Chapter 3.0, Project Description, of this PEA, which would further reduce the potential for the Proposed Project to result in polluted discharge. As such, operation of the Proposed Project would be expected to result in a less than significant impact related to violating any water quality standards or waste discharge requirements.

Would the project 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Construction Impacts

Less Than Significant Impact. During construction of the Proposed Project, the anticipated removal of groundwater would be largely limited to dewatering excavations (for the placement of tubular steel poles [TSPs] and light-weight steel [LWS] poles). If this would be necessary, the effect would be localized and short in duration. There may also be some use of groundwater by SCE contractors for use on water trucks for dust-control measures. However, this use would also be limited in size and scope, and the water supplies would come from existing permits or permitted uses. Construction related activities for the Proposed Project would not be expected to deplete or alter the existing groundwater supplies. During construction, a majority of the Proposed Project area would incorporate permeable applications, such as gravel or crushed rock, or would remain largely in the existing condition and, as such, would not interfere with the existing groundwater conditions. The total number of acres that would be temporarily disturbed as part of the Proposed Project during construction would be approximately 34.7 acres, but this area would not be expected to be completely covered with impermeable materials and would not be expected to significantly interfere with the groundwater recharge. As such, construction of the Proposed Project would be expected to result in a less than significant impact related to substantially depleting groundwater supplies or interfering substantially with groundwater recharge.

Operation Impacts

Less Than Significant Impact. During operation, it is anticipated that the Proposed Project would use water supplied by a private company or groundwater for limited landscape irrigation. The proposed landscaping would be limited to a small area surrounding the proposed substation site. The landscaping would also be appropriate for the area and utilize drought resistant plant species to further reduce the need for significant water use. Nonpotable water service for uses, such as the restroom at the proposed Banducci Substation site, would be provided by a private company outside of SCE; however, these uses would be significantly limited because the restrooms would not be in regular use as the site would be unstaffed. During operation of the Proposed Project, approximately 6.4 acres would be permanently disturbed, 6.3 acres of which would be located at the proposed Banducci Substation site. A portion of the proposed Banducci Substation site would contain permeable applications, such as gravel or crushed rock, or would remain in the preconstruction condition, so the Proposed Project would not significantly interfere with groundwater recharge. As such, operation of the Proposed Project would be expected to result in a less than significant impact related to substantially depleting groundwater supplies or interfering substantially with groundwater recharge.

Would the project 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 which would result in substantial erosion or siltation onsite or offsite?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would entail the grading and disruption of approximately 34.7 acres. As the construction-related disturbance of the land at the Proposed Project site is at least 1 acre, erosion and sedimentation control measures would be implemented via BMPs as part of the required SWPPP. Additionally, a majority of the Proposed Project's grading would be completed at the proposed Banducci Substation site. The substation pad would typically be graded to establish a slope of approximately 1 to 2 percent and would not occur without the prior notification and consultation with the Kern County Planning and Community Development Department to protect the integrity of existing drainage at the proposed substation site and within the Substation Study Area. As such, construction of the Proposed Project would be expected to result in less than significant impacts related to substantially altering the existing drainage pattern of the site or area.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would entail the permanent disturbance of approximately 6.4 acres (including the Banducci Substation site and subtransmission and telecommunications components), Transmission/subtransmission facility sites are typically graded to follow with the natural ground-surface contour. In addition, SCE would coordinate with the Kern County Planning and Community Development Department and incorporate BMPs and measures for construction of permanent erosion-control measures (for example, permanent sedimentation barriers and efficient irrigation measures) that would

minimize the erosion of soils during operation. Through design, the proposed Banducci Substation would also utilize manufactured drainages that would divert water around the proposed Banducci Substation structure back into the natural drainage pattern. Finally, any new access roads that would be developed as part of the Proposed Project would be designed to follow the natural ground-surface contours and, if necessary, would incorporate erosion-control features, such as waterbars and overside drains. As such, operation of the Proposed Project would be expected to result in less than significant impacts related to substantially altering the existing drainage pattern of the site or area.

Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Construction Impacts

Less Than Significant Impact. During construction, disturbance and removal of vegetation along with compaction and removal of soil from the proposed Banducci Substation site would be expected to increase runoff. BMPs, as developed by the QSD and implemented by the QSP, would be expected to reduce the potential for significant runoff from the site to contain pollutants, including sediment, chemicals, or oils associated with grading, use of vehicles, and other equipment, and other construction-related items or activities. The Proposed Project would incorporate BMPs, including the siting of specific areas for equipment and material storage and maintenance and the use of a water truck for dust control. Related measures, such the installation of landscaping, would also be incorporated to reduce potential risks associated with construction-related activities that might inadvertently contribute to the amount of runoff or pollutants. These measures would be implemented to contain the potential pollution and slow runoff and ensure that the construction-related activities comply with NPDES/CGP requirements. Additionally, SCE would coordinate with the Kern County Planning and Community Development Department through the grading permit process to ensure that the provisions of the substation plans for storm water discharge are acceptable to the local system. As such, construction of the Proposed Project would be expected to result in less than significant impacts related to runoff water that would exceed the capacity of planned storm water drainage systems or provide substantial sources of polluted runoff.

Operation Impacts

Less Than Significant Impact. As with construction, operation of the Proposed Project would comply with federal, State, and local regulations by the provisions of the SWPPP and associated BMPs. Any additional runoff from the Proposed Project, including operation of transmission lines and access roads, would be expected to be minimal, as the permanent disturbed area for the Proposed Project would be approximately 6.4 acres and would be unlikely to exceed the capacity of a storm water system. A majority of the proposed Banducci Substation site would be covered with permeable material designed to increase infiltration and reduce runoff at the site. Additionally, SCE's SWMP and other design features of the proposed Banducci Substation

would be developed to reduce or avoid substantial storm water discharge during operation. As such, operation of the Proposed Project would be expected to result in less than significant impacts related to runoff water that would exceed the capacity of or planned storm water drainage systems or provide substantial sources of polluted runoff.

Would the project otherwise substantially degrade water quality?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would comply with the established laws related to water quality. The major potential sources for water degradation associated with construction of the Proposed Project include turbidity, which is an indication of the clarity of the water and can result from the release of sediment from grading and other site preparation activities, and potential increases in pH levels resulting from concrete waste (which has high alkalinity levels when wet or fresh) at the site. Additional risks to water quality are discussed in Section 4.8, Hazards and Hazardous Materials, of this PEA. Construction of the Proposed Project would entail grading activities and limited use of chemicals and materials that have the potential to degrade water quality if they were spilled or otherwise transmitted from the site to off-site waterways. However, the Proposed Project would incorporate BMPs, including concrete waste management, a SWPPP, an SPCC Plan, and other related measures that would significantly reduce or prevent the potential for these construction-related activities. As such, construction of the Proposed Project would be expected to result in less than significant impacts related to degrading water quality.

Operation Impacts

Less Than Significant Impact. As noted above, the Proposed Project would comply with the established laws related to water quality. Water quality concerns and potential sources have been discussed in the construction impacts section above and in Section 4.8, Hazards and Hazardous Materials, of this PEA. Operation and maintenance of the Proposed Project would entail less activity than that anticipated during construction and would not have a significant amount of activity that might lead to events that might impact water quality. However, there would still be the potential for chemicals or materials to accidentally spill or to be otherwise transmitted to waterways from the site. SCE would incorporate BMPs and would develop and implement a SPCC Plan, SWMP, and other related measures that would significantly reduce or prevent the potential for these construction related activities to degrade water quality. As such, operation of the Proposed Project would be expected to result in less than significant impacts related to degrading water quality.

Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Construction Impacts

No Impact. The Proposed Project would be located in an area that is designated as having a low flood hazard risk (Zone X) and is protected by a levee or dam from a 100-year flood (FEMA, 2011). The small sections of areas designated as Zone A (no base evaluation) that cross and are located adjacent to the Proposed Project may be subject to inundation by a 100-year flood. Although proposed telecommunications components of the Proposed Project are located near Zone A areas, construction of the facilities would not include the development of housing. Therefore, construction of the Proposed Project would not be expected to result in impacts related to placing housing within a 100-year flood hazard area.

Operation Impacts

No Impact. As noted above, the Proposed Project would be located in an area that is designated as having a low flood hazard risk (Zone X) and is protected by a levee or dam from the 100-year flood hazard risk. The Proposed Project would not entail a housing element. As such, operation of the Proposed Project would not be expected to result in a significant impact related to placing housing within a 100-year flood hazard area.

Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Construction Impacts

Less Than Significant Impact. The Proposed Project area has a moderate to low risk of being inundated in a storm event. The area is outside of the 500-year flood level and is largely protected by a levee or dam from the 100-year flood (FEMA, 2011). Construction-related activities would entail placing and replacing poles along the proposed telecommunications routes and the development of the proposed Banducci Substation. None of these activities would alter or interfere with the existing level of protection throughout the Proposed Project area in a manner that would impede or redirect flood flows. The poles would not contain elements that by size or dimension would impede or redirect flood flows; the existing poles would be replaced by poles of the same dimensions. Similarly, the substation pad would typically be graded to establish a slope of approximately 1 to 2 percent, thereby maintaining preconstruction flood flow conditions. As such, construction of the Proposed Project would be expected to result in less than significant impacts related to the placement of structures within a 100-year flood hazard area that would impede or redirect flood flows.

Operation Impacts

Less Than Significant Impact. As previously noted, the Proposed Project area has a moderate to low risk of being inundated in a storm event. Operation of the Proposed Project would include the maintenance of poles and substation structures noted in the previous construction impacts discussion. As previously mentioned, the pole structures would not be expected to impede or redirect flood flows. Following development of the proposed Banducci Substation, the site would contain drainages that would divert water around the proposed Banducci Substation structure back into the natural drainage pattern. The Proposed Project related activities would not alter or interfere with the existing level of protection throughout the Proposed Project area in a manner that would impede or redirect flood flows. As such, operation of the Proposed Project would be expected to result in less than significant impacts related to the placement of a structure within a 100-year flood hazard area that would impede or redirect flood flows.

Would the project 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?

Construction Impacts

Less Than Significant Impact. The proposed Banducci Substation would be located approximately 1 mile south of the Brite Valley Dam inundation area. Construction of the Proposed Project would be halted in the event of an extreme rain or storm event. Construction workers would not be at the site and, as such, would not be at risk of loss, injury, or death. However, in the unlikely event of an extreme rain or storm event concurrent with dam failure, portions of the Banducci Substation structure would have the potential to be inundated or flooded with water. However, during storm events, the Proposed Project would be unstaffed and the potential for flooding at the proposed Banducci Substation site would be low, based upon the Zone X designation (FEMA, 2011). As a result, construction of the Proposed Project would be expected to result in less than significant impacts related to exposure of people or structures to a significant risk of loss, injury, or death involving flooding.

Operation Impacts

Less Than Significant Impact. As noted above, the proposed Banducci Substation would be located approximately 1 mile south of the Brite Valley Dam inundation area. In the event of a storm event, the proposed Banducci Substation would have a low risk of inundation due to dam failure. However, as noted above, the Proposed Project would be unstaffed and would have a low potential for flooding, based upon the Zone X designation (FEMA, 2011). The substation would be operated electronically and personnel would access the site infrequently to perform standard and required maintenance tasks. These maintenance activities would be planned to occur outside of expected extreme rain or storm events. Therefore, operation of the Proposed Project would not be expected to expose people to significant loss, injury, or death as a result of the failure of a levee or dam. As a result, operation of the Proposed Project would be expected to result in less than significant impacts due to exposure of people or structures to a significant risk of loss, injury, or death involving to flooding.

Would the project expose people or structures to inundation by seiche, tsunami or mudflow?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project (specifically the proposed Banducci Substation) would be conducted near several small bodies of water or perennial areas, including Brite Lake. Although these small bodies of water would not be expected to result in a seiche, portions of the proposed Banducci Substation may be subject to seiche-related hazards in an extreme rain event due to its proximity to the Brite Valley Dam inundation area. However, construction-related activities would not occur during extreme rain events and, as previously noted, the possibility of such events is unlikely. As such, the construction of the Proposed Project would be expected to result in less than significant impacts.

With respect to tsunamis, construction of the Proposed Project would occur more than 100 miles east of the Pacific Ocean and would not face a tsunami risk; therefore, there would be no expected impacts related to a tsunami.

With respect to mudflows, construction of the Proposed Project would occur on relatively flat land. The layout of this land would largely prevent mudflows where earth and surface materials are rapidly transported downhill. Although a majority of the soil at the Proposed Project Study Area is loamy sand on slopes of less than 15-percent grade, these soils may not sufficiently absorb the water in a heavy rain event. However, the relatively flat topography would not be susceptible to mudflow risks. Construction-related activities would not be expected to occur during extreme rain events and, as such, would not expose people to significant mudflow risks. During construction, the portion of the proposed substation structure that may be exposed to a risk of mudflow would be less than significant.

Operation Impacts

Less Than Significant Impact. The Proposed Project (specifically the proposed Banducci Substation) would be located and operated near several small bodies of water or perennial areas. The largest of these areas is Brite Lake, which is located 3 miles northeast of the proposed Banducci Substation site. Although these small bodies of water would not be expected to result in a seiche, the proposed Banducci Substation site would be located approximately 1 mile south of the Brite Valley Dam inundation area and would be potentially impacted by seiche-like waves or related occurrences in an extreme rain event. The proposed Banducci Substation would be unstaffed and would not be expected to expose the infrequent maintenance or operation personnel to impacts. As such, operation of the Proposed Project would be expected to result in less than significant impacts.

As previously noted, the Proposed Project would be located more than 100 miles east of the Pacific Ocean, so no impacts related to a tsunami would be expected.

Finally, it is anticipated that mudflow risks associated with development of the Proposed Project would be low. Although the soil at the proposed Banducci Substation site and within the Proposed Project Study Area may not be able to sufficiently absorb the water in a heavy rain event, the area is relatively flat and following grading, the site would be expected to drain the water from the Proposed Project. As such, the potential for impacts associated with inundation by mudflow would be less than significant. Mudflow risks are addressed in further detail in Section 4.6, Geology and Soils of this PEA.

4.9.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for hydrology and water quality.

4.9.6 Alternative

Site Alternative B

Development of Site Alternative B would be expected to result in impacts that are similar to those described in this section for the Proposed Project. Site Alternative B would be located approximately 0.5 mile north of the proposed Banducci Substation site and contains almost identical hydrology and water quality features as the Proposed Project. As such, Site Alternative B would be expected to result in the same impacts as the Proposed Project, which would be less than significant.

4.9.7 References

California Department of Conservation (DOC) Division of Oil, Gas and Geothermal Resources (DOGGR). *California Oil and Gas Well Locations.* Retrieved October 17, 2011, from http://www.conservation.ca.gov/dog/Pages/WellPermitting.aspx#p_

California Department of Water Resources (DWR). 2004. *California Groundwater Bulletin 118: Tulare Lake Hydrologic Region-Tehachapi Valley West Groundwater Basin.* Sacramento, CA.

California Regional Water Quality Control Board Central Valley Region (RWQCB). *The Water Quality Control Plan (Basin Plan)* (4th Ed. 1998, amended 2009). Sacramento, CA.

California Stormwater Quality Association (CASQA). (2003). *New Development and Redevelopment Handbook.* Retrieved August 3, 2011, from http://www.cabmphandbooks.com/Development.asp

Federal Emergency Management Agency (FEMA). (2011). *Flood Insurance Rate Maps - Item IDs: 06029C3225E and 06029C3250E.* Jessup, MD.

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdfNational Oceanic and Atmospheric Administration. (2011). *National Weather Service.* Retrieved from http://www.weather.gov/

Tehachapi-Cummings County Water District (TCCWD). (2003). *Tehachapi-Cummings County Water District.* Retrieved July 7, 2011, from http://www.tccwd.com/index2.html

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA). (1999). *Soil Taxonomy: A Basic System of Soil Classification for Making and Interpreting Soil Surveys* (2nd Ed.). Washington, DC.

U.S. Geological Survey (USGS). (2012). *U.S. Geological Survey Flood Inundation Mapping Science.* Retrieved from http://water.usgs.gov/osw/flood_inundation/

4.10 Land Use and Planning

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to land use and planning associated with the construction and operation of the proposed Banducci Substation and ancillary facilities (Proposed Project) and its alternatives. In accordance with California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of land use and planning in the Proposed Project Study Area, evaluates the land use and planning characteristics, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.10.1 Environmental Setting

In general, the landscape of the Proposed Project Study Area and the surrounding land is rural. Mountainous areas surround the Proposed Project to the north and south. There are several residences located near the proposed telecommunications routes. The closest of the residences are one single family residence located off Highline Road just north of the Proposed Telecommunications Route 1 and several clusters of residences located just east and west of the Proposed Telecommunications Route 2 along South Curry Street and South Mill Street in the City of Tehachapi. The nearest cluster of residential development to the proposed Banducci Substation is located in the community of Stallion Springs, which is approximately 2 miles southwest of the proposed Banducci Substation site. The community of Bear Valley Springs is located approximately 3miles northwest of the proposed Banducci Substation site. The California Correctional Institution is located approximately 1.6 miles northeast and east of the proposed Banducci Substation site within the City of Tehachapi. The Proposed Project Study Area is located entirely within Kern County, California. A portion in the northeast corner of the Proposed Project Study Area is located with the City of Tehachapi and the remainder of the Study Area is located within unincorporated Kern County. For the purpose of the land use analysis, the Proposed Project Study Area was assessed.

The proposed telecommunications routes include two crossings of roadways that are within the jurisdiction of the California Department of Transportation (Caltrans; State Route [SR]-202 and SR-58) and three crossings of railroads that are within the jurisdiction of Union Pacific Railroad (UPRR).

Land Use

Both the Kern County General Plan and the Greater Tehachapi Area Specific and Community Plan (GTASCP) are applicable to the Proposed Project (Kern County, 2009 and 2010). There are six land use designations in the Substation Study Area (Resource Reserve, Intensive Agriculture, Incorporated Cities [for the California Correctional Institution], and several residential designations: Minimum 2.5 Gross Acres/Unit, Minimum 5 Gross Acres/Unit, and Minimum 20

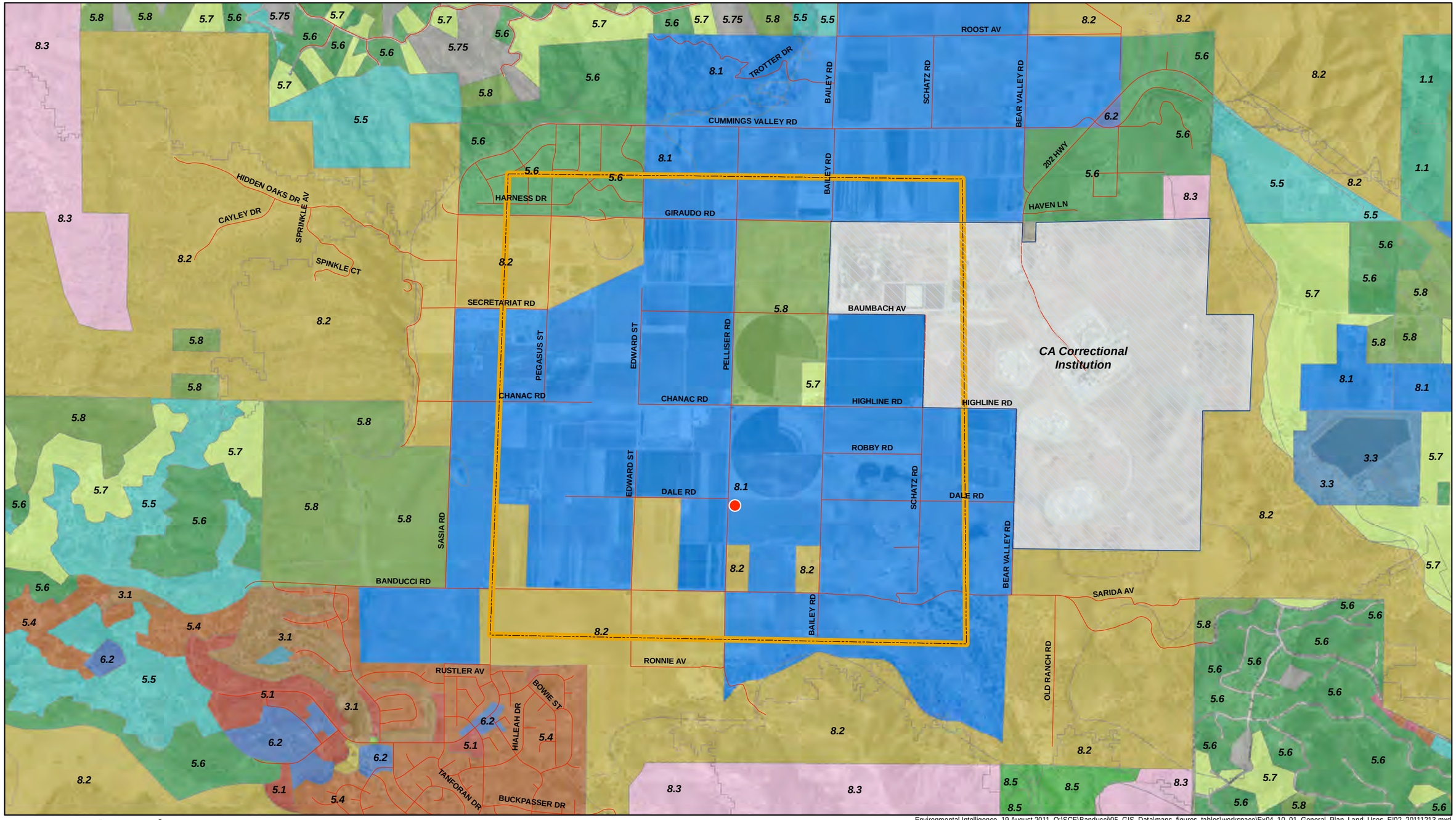
Gross Acres/Unit) as shown in Figure 4.10-1: General Plan Land Uses and Table 4.10-1: Existing and Designated Land Use for the Substation Study Area. The proposed Banducci Substation site is designated as Intensive Agriculture and the areas where the proposed telecommunications routes would be located are largely designated as Residential, Incorporated Cities, Resource Agriculture, and Intensive Agriculture. The Land Use chapter of the GTASCP describes the Intensive Agriculture designation as follows:

> Areas devoted to the production of irrigated crops or having a potential for such use. Other agricultural uses, while not directly dependent on irrigation for production, may also be consistent with the intensive agriculture designation. Minimum parcel size is 40 acres gross. Uses shall include, but\ are not limited to, the following: Irrigated cropland; orchards; vineyards; horse ranches; raising of nursery stock ornamental flowers and Christmas trees; fish farms; bee keeping; ranch and farm facilities and related uses; one single-family dwelling unit; cattle feed yards; dairies; dry land farming; livestock grazing; water storage; ground water recharge acres; mineral; aggregate; and petroleum exploration and extraction; hunting clubs; wildlife preserves; farm labor housing; public utility uses; and agricultural industries pursuant to provisions of the Kern County Zoning Ordinance, and land within development areas subject to significant physical constraints (Kern County, 2010).

Table 4.10-1: Existing and Designated Land Use for the Substation Study Area

Plan Jurisdiction	Map Code Designations
Kern County General Plan	1.2: Incorporated Cities
	5.6: Residential (Minimum 2.5 gross acres/unit)
	5.7: Residential (Minimum 5 gross acres/unit)
	5.8: Residential (Minimum 20 gross acres/unit)
	8.1: Intensive Agriculture
	8.2: Resource Reserve

SOURCE: Kern County, 2009 and 2010



Environmental Intelligence. 19 August 2011. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_10_01_General_Plan_Land_Uses_EI02_20111213.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Road

- 1.1 State or Federal Land
- 1.2 Incorporated Cities
- 3.1 Public or Private Recreation Areas
- 3.3 Other Facilities
- 5.1 Maximum 29 Units/Net Acre
- 5.2 Maximum 16 Units/Net Acre
- 5.4 Maximum 4 Units/Net Acre
- 5.45 Maximum 2 Units/Net Acre
- 5.5 Maximum 1 Unit/Net Acre
- 5.6 Minimum 2.5 Gross Acres/Unit
- 5.7 Minimum 5 Gross Acres/Unit
- 5.75 Minimum 10 Gross Acres/Unit
- 5.8 Minimum 20 Gross Acres/Unit
- 6.1 Major Commercial
- 6.2 General Commercial
- 8.1 Intensive Agriculture (Min. 20 Acre Parcel Size)
- 8.2 Resource Reserve (Min. 20 Acre Parcel Size)
- 8.3 Extensive Agriculture (Min. 20 Acre Parcel Size)
- 8.5 Resource Management (Min. 20 Acre Parcel Size)

N W E S

0 0.5 1 Miles

Figure 4.10-1: General Plan Land Uses
Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Zoning

The Substation Study Area is located in three Kern County zoning districts: (1) A (Exclusive Agriculture), (2) E (Estate) 2.5 acres with RS (Residential Suburban) Combining, and (3) Institutional (for the California Correctional Institution) as shown in Figure 4.10-2: Kern County Zoning. The proposed Banducci Substation site and the adjacent area are within the Exclusive Agriculture district. The purpose and application of the Exclusive Agriculture zoning district, as described by the Kern County Zoning Ordinance is "to designate areas suitable for agricultural uses and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to nonagricultural uses" (Kern County, 2011). Uses in the Exclusive Agriculture District are limited primarily to agricultural uses and other activities compatible with agricultural uses (Kern County, 2011). Zoning designations along the proposed telecommunication routes include: Agriculture (both Exclusive and Limited), Residential, Resource Reserve, Commercial, Industrial, and Manufacturing.

Staging Areas

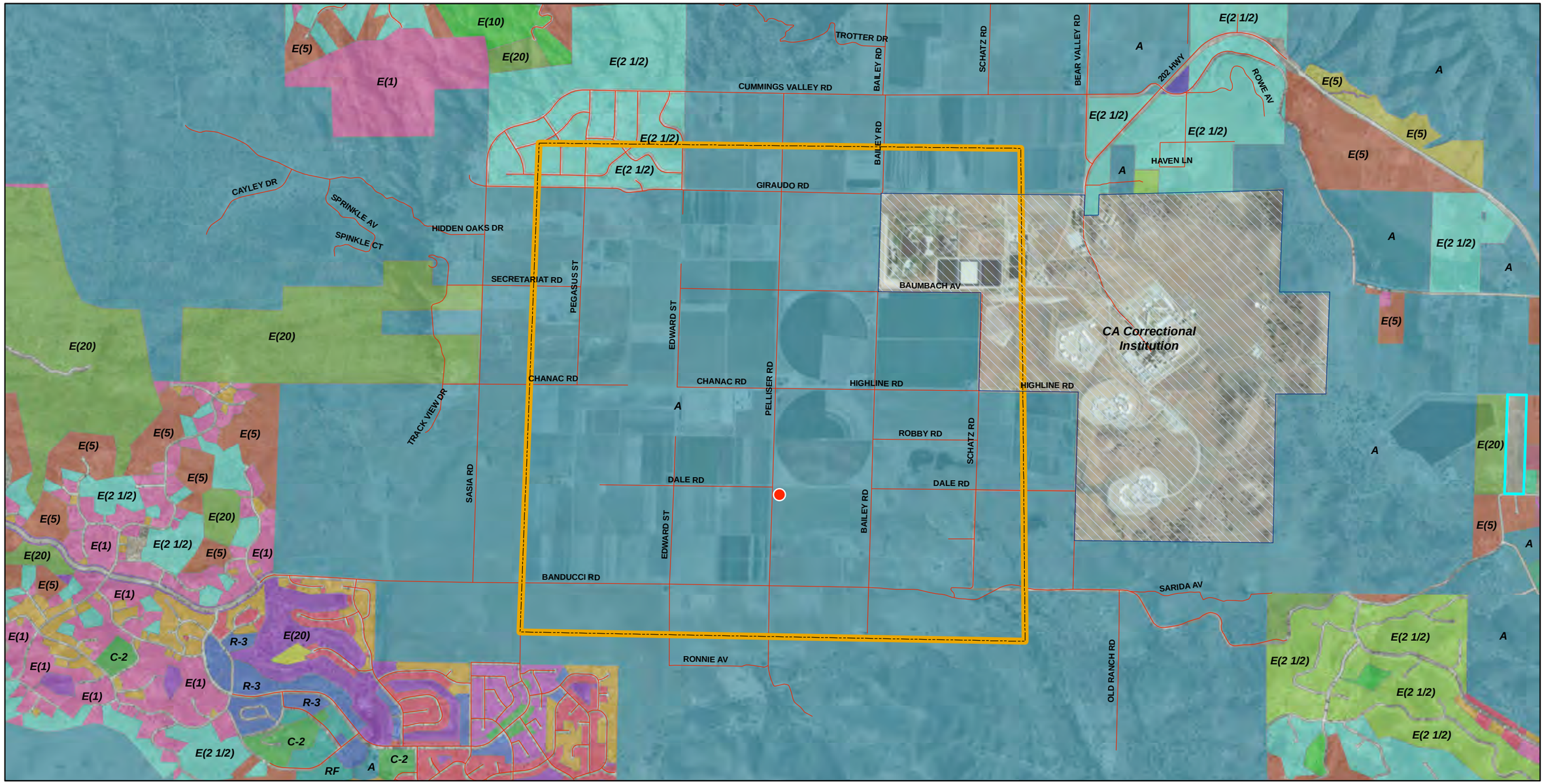
The Proposed Project would require the establishment of temporary staging yards (see Figure 3.7). These staging yards would be from approximately 0.5 to 1 acre in size, depending on the land availability and intended use. The land use designations and zoning classifications for each of these staging yards are described below.

Banducci Substation
This staging yard would be an approximately 1 acre site located within the boundaries of the proposed Banducci Substation site. The land use designation for this site is Intensive Agriculture, and the zoning designation for the site is Exclusive Agriculture (Kern County, 2009).

Tehachapi Service Center
This staging yard would be an approximately 0.5 acre site which would be located within the boundaries of the SCE Tehachapi Service Center in the City of Tehachapi within an area that includes light industrial, residential, and manufacturing uses. The current use of this site is as a commercial and utility-related use.

North of Highline Road
This staging yard would be an approximately 1 acre site which would be located northwest of the proposed Banducci Substation site at the northwest corner of the intersection of Pelliser Road and Highline Road. The current land use designation for this site is Intensive Agriculture, and the zoning designation for the site is Exclusive Agriculture (Kern County, 2009).

Highwind Substation
This staging yard would be an approximately 1 acre site which would be located within the boundaries of SCE's existing Highwind Substation. This area is located at the southwest corner of Steuber Road and Highline Road. The current land use designation for this site is Intensive Agriculture, and the zoning designation for the site is Exclusive Agriculture (Kern County, 2009). The existing use of this site is a substation.



Environmental Intelligence. 19 August 2011. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_10_02_Kern_County_Zoning_EI02_20111213.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Road
- A - EXCLUSIVE AGRICULTURE
- A-1 - LIMITED AGRICULTURE
- C-1 - NEIGHBORHOOD COMMERCIAL, PRECISE DEVELOPMENT COMBINING
- C-2 - GENERAL COMMERCIAL, PRECISE DEVELOPMENT COMBINING
- CO - COMMERCIAL OFFICE
- E(1) - ESTATE 1 ACRE, RESIDENTIAL SUBURBAN COMBINING
- E(1/2) - ESTATE .5 ACRES, RESIDENTIAL SUBURBAN COMBINING
- E(1/4) - ESTATE .25 ACRES
- E(1/4) - ESTATE .25 ACRES, RESIDENTIAL SUBURBAN COMBINING
- E(10) - ESTATE 10 ACRES, RESIDENTIAL SUBURBAN COMBINING
- E(2 1/2) - ESTATE 2.5 ACRES, RESIDENTIAL SUBURBAN COMBINING
- E(2 1/2) - ESTATE 2.5 ACRES, RESIDENTIAL SUBURBAN COMBINING, FLOODPLAIN SECONDARY COMBINING
- E(2 1/2) - ESTATE 2.5 ACRES, RESIDENTIAL SUBURBAN COMBINING, MOBILEHOME COMBINING
- E(20) - ESTATE 20 ACRES
- E(20) - ESTATE 20 ACRES, RESIDENTIAL SUBURBAN COMBINING
- E(20) - ESTATE 20 ACRES, RESIDENTIAL SUBURBAN COMBINING, MOBILEHOME COMBINING
- E(5) - RESIDENTIAL
- E(5) - ESTATE 5 ACRES, RESIDENTIAL SUBURBAN COMBINING
- E(5) - ESTATE 5 ACRES, RESIDENTIAL SUBURBAN COMBINING, FLOODPLAIN COMBINING
- E(5) - ESTATE 5 ACRES, RESIDENTIAL SUBURBAN COMBINING, FLOODPLAIN SECONDARY COMBINING
- E(5) - ESTATE 5 ACRES, RESIDENTIAL SUBURBAN COMBINING, MOBILEHOME COMBINING
- FPP - FLOODPLAIN PRIMARY
- R-2 - MEDIUM DENSITY RESIDENTIAL, PRECISE DEVELOPMENT COMBINING
- R-3 - HIGH DENSITY RESIDENTIAL, PRECISE DEVELOPMENT COMBINING
- RF - RECREATION FORESTRY, PRECISE DEVELOPMENT COMBINING

N W E S

0 0.5 1 Miles

FIGURE 4.10-2: KERN COUNTY ZONING
PROPOSED BANDUCCI SUBSTATION PROJECT

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

4.10.2 Regulatory Setting

The regulatory framework discussed below identifies the federal, State, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to land use and planning.

4.10.1.1 Federal

The Proposed Project does not contain any federal lands or components that would require the review or approval of a federal agency; therefore, no federal regulations were reviewed.

4.10.1.2 State

There are no applicable State regulations regarding land use for the Proposed Project.

4.10.1.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

The Kern County General Plan is a policy document designed to give long-range guidance to local decision makers regarding growth and resources of the unincorporated Kern County jurisdiction. The following goals and policies of the Kern County General Plan (Kern County, 2009) would be relevant for the Proposed Project.

Goals

- Goal 7. Facilitate the provision of reliable and cost effective utility services to residents of Kern County (Land Use, Open Space, and Conservation Element).

- Goal 1. To encourage the safe and orderly development of transmission lines to access Kern County's electrical resources along routes, which minimize potential adverse environmental effects (Energy Element).[1]

Policies

- Policy 1. The County should encourage the development and upgrading of transmission lines and associated facilities (e.g., substations) as needed to serve Kern County's residents and access the County's generating resources, insofar as transmission lines do not create significant environmental or public health and safety hazards (Energy Element).

- Policy 2. The County shall review all proposed transmission lines and their alignments for conformity with the Land Use, Conservation, and Open Space Element of this General Plan (Energy Element).

- Policy 3. In reviewing proposals for new transmission lines and/or capacity, the County should assert a preference for upgrade of existing lines and use of existing corridors where feasible (Energy Element).

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe a collection of unincorporated communities located in eastern Kern County along SR 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan, goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

City of Tehachapi General Plan

The City of Tehachapi General Plan is a policy document designed to give long-range guidance to local decision makers regarding growth and resources within the City of Tehachapi (City of Tehachapi, 1996). The City of Tehachapi General Plan does not include goals or policies applicable to the Proposed Project.

[1] This goal is not assigned a number in the Kern County General Plan. However, the number 1 has been assigned to this goal in this section for consistency in this PEA document.

4.10.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- Conflict with any applicable habitat conservation plan or natural community conservation plan?

- 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?

- Physically divide an established community?

4.10.4 Impact Analysis

The land use and planning impact analysis for this PEA was evaluated based upon a review of the Kern County General Plan (Kern County, 2009); the GTASCP (Kern County, 2010); site reconnaissance; aerial and satellite images; and other relevant sources. The impacts to land use and planning were analyzed by first establishing the character of the Proposed Project Study Area through a review of the land use and zoning maps of the Proposed Project Study Area and the surrounding land to determine the land use and zoning designations; site visits to determine current land use; and a review of aerial imagery to determine the Proposed Project site's relation to nearby communities. Once the land use and zoning designations were established, the Proposed Project's components were reviewed to determine if they were consistent with the land use and zoning classifications. In addition, the construction and operation elements of the Proposed Project were reviewed to determine what, if any, effect they would have in regards to dividing the surrounding communities.

Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Construction Impacts

No Impact. As noted in Section 4.4, Biological Resources of this PEA, construction of the Proposed Project would not be located near or within any applicable habitat conservation plan or natural community conservation plan and thus would not be expected to conflict with any plans or result in impacts to sensitive plant or wildlife species (Kern County, 2010).

Operation Impacts

No Impact. As with construction of the Proposed Project and as discussed in Section 4.4, Biological Resources of this PEA, operation of the Proposed Project would not be located near or within any applicable habitat conservation plan or natural community conservation plan and thus would not be expected to conflict with any plans or result in impacts to sensitive plant or wildlife species (Kern County, 2010).

Would the project 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?

Construction Impacts

No Impact. Construction of the Proposed Project would not conflict with any applicable land use plan, policy, or regulation. Construction of the proposed Banducci Substation would occur on land designated as Intensive Agriculture by the Kern County General Plan and the GTASCP; however, site reconnaissance and a review of the aerial and satellite images of the proposed Banducci Substation site over the past four years indicate that the land has neither recently been used nor is it currently being used for agricultural purposes. Additionally, the Intensive Agriculture land use designation permits public utility uses. Therefore, construction of the proposed Banducci Substation component of the Proposed Project would not conflict with the land use designation. The Kern County Zoning Ordinance defines the Substation Study Area as Exclusive Agriculture. The Exclusive Agriculture zoning district permits the use of utility substations, transmission lines and supporting poles, and underground facilities for gas, water, electricity, telephone, or telegraph service owned and operated by a public utility company or other company under the jurisdiction of the CPUC (Kern County, 2011). All the proposed Banducci Substation elements would be within the Exclusive Agriculture zoning district, which permits the use of substations and transmission lines and supporting poles.

Construction of the proposed telecommunications routes within Kern County would occur largely on areas designated as Intensive Agriculture, Resource Reserve, or Residential by the Kern County General Plan. This land is largely zoned as Exclusive Agriculture, Limited Agriculture, and Estate. In addition, a portion of the proposed telecommunications routes would be located within the City of Tehachapi. As with the proposed Banducci Substation, construction of the proposed telecommunications routes would occur on land where utility-related uses are permitted; additionally, this land would be within and existing SCE ROW and would not be expected to conflict with the Kern County General Plan and Zoning Ordinance, the GTASCP, or the City of Tehachapi General Plan and Zoning Ordinance.

Construction of the Proposed Project's telecommunications facilities, two crossings of roadways that are within the jurisdiction of Caltrans and three crossings of railroads that are within the jurisdiction of UPRR, easements and exclusionary permits would be required for these crossings.

However, the telecommunications facilities would not conflict with the use of the railroad, highways, or any existing or proposed plans or uses.

By improving the electrical infrastructure within Kern County, the Proposed Project would be consistent with Goal 7 of the Plan Land Use, Open Space, and Conservation Element; Policy 1 of the Energy Element of the Kern County General Plan; and Policies LU.12 and COS.49 of the GTASCP (Kern County, 2009; Kern County, 2010). In addition, by using existing distribution routes whenever feasible, the Proposed Project would be consistent with Policy 3 of the Energy Element of the Kern County General Plan and Policy COS.51 of the GTASCP (Kern County, 2009; Kern County, 2010). Therefore, the construction of the Proposed Project would be compatible with the Kern County General Plan, Kern County Zoning Ordinance, and the GTASCP.

Operation Impacts

No Impact. Operation of the Proposed Project would not conflict with any applicable land use plan, policy, or regulation. The proposed Banducci Substation would be located on areas with land use designated as Intensive agriculture; however, the land is not currently being used for agricultural purposes. The Intensive Agriculture land use designation permits public utility uses. Therefore, operation of the proposed Banducci Substation component of the Proposed Project would not conflict with the land use designation. The Kern County Zoning Ordinance defines the Substation Study Area as Exclusive Agriculture. The Exclusive Agriculture zoning district permits the use of utility substations, transmission lines and supporting poles, and underground facilities for gas, water, electricity, telephone, or telegraph service owned and operated by a public utility company or other company under the jurisdiction of the CPUC (Kern County, 2011). All the proposed Banducci Substation elements would be located within the Exclusive Agriculture zoning district, which permits the use of substations and transmission lines and supporting poles. As noted above, by improving the electrical infrastructure within Kern County, the Proposed Project would be consistent with Goal 7 of the Plan Land Use, Open Space, and Conservation Element; Policy 1 of the Energy Element of the Kern County General Plan; and Policies LU.12 and COS.49 of the GTASCP (Kern County, 2009; Kern County, 2010). In addition, by using existing telecommunication infrastructure whenever feasible, the Proposed Project would be consistent with Policy 3 of the Energy Element of the Kern County General Plan and Policy COS.51 of the GTASCP (Kern County, 2009; Kern County, 2010). Therefore, operation of the Proposed Project would be compatible with the Kern County General Plan, Kern County Zoning Ordinance, and the GTASCP.

Would the project physically divide an established community?

Construction Impacts

No Impact. Construction of the proposed Banducci Substation would take place on rural land that is currently designated as Intensive Agriculture by the Kern County General Plan and has a zoning designation of Exclusive Agriculture. The proposed Banducci Substation site is located in a sparsely populated rural area where the established roadways in the vicinity include Pelliser

Road and Banducci Road. Construction of the proposed Banducci Substation would not block Pelliser Road or Banducci Road or any other established roadway or pathway within an established community. Although the proposed Banducci Substation site would contain security gates and walls, the proposed Banducci Substation would be designed to be consistent with the existing community, and as such would not create a substantial barrier that would substantially alter or shift the existing community in a manner that would divide the area. Installation of the proposed telecommunications routes would be located largely on existing infrastructure; not outside of the existing SCE ROW. Installation of the proposed telecommunications facilities may be expected to temporarily disrupt traffic in the surrounding neighborhoods as lanes may need to be closed to provide for a safe construction environment; however, any disruption to traffic would be temporary and would not block or divide the established areas. Therefore, construction of the Proposed Project would not physically divide an established community.

Operation Impacts

No Impact. As with construction, operation of the proposed Banducci Substation would take place on sparsely populated rural land that is currently designated as Intensive Agriculture by the Kern County General Plan and that has a zoning designation of Exclusive Agriculture. The established roadways in the vicinity of the proposed Banducci Substation site, Pelliser Road and Banducci Road, would not be blocked by operation. Further, the operation of the proposed Banducci Substation would not consist of additional elements that would divide the established community.

Operation of the proposed telecommunications facilities would occur within the existing SCE ROW. As such, operation of the proposed telecommunications facilities would not create a physical division within the communities it traverses.

Therefore, operation of the Proposed Project would not result in impacts related to physically dividing an established community.

4.10.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for land use and planning.

4.10.6 Alternative

Site Alternative B

The setting of Site Alternative B is rural and similar to that of the Proposed Project. As with the Proposed Project, construction and operation of Site Alternative B would not block any roadways or physically divide an established community.

The General Plan land use classification of Site Alternative B is Residential, Minimum 20 Gross Acres/Unit and the zoning designation is "Exclusive Agriculture." Both the Kern County General Plan and Zoning Ordinance allow for the development of a utility substation within

these land use classifications. The proposed telecommunications routes would be the same as for the Proposed Project except that Site Alternative B would not include the portion of the route along Pelliser Road that heads south to the proposed Banducci Substation site. Therefore, as with the Proposed Project, Site Alternative B would result in no impacts to land use and planning.

4.10.7 References

City of Tehachapi. (1996). *City of Tehachapi General Plan*. Tehachapi, CA. Retrieved from http://www.tehachapicityhall.com/index.aspx?NID=81

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kern County. (2011). Title 19 of the Kern County Ordinance Code. *Kern County Zoning Ordinance*. Retrieved January 25, 2012, from http://www.co.kern.ca.us/planning/pdfs/KCZODec11.pdf

4.11 Mineral Resources

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to mineral resources associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA subsection provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of mineral resources in the Proposed Project Study Area, evaluates the mineral resource characteristics, and assesses impacts that have the potential to occur as a result of the Proposed Project.

4.11.1 Environmental Setting

Mineral Resources

Mineral resources in Kern County include petroleum, natural gas, borax, cement production, and construction aggregates (Kern County, 2009; USGS, 2011). Petroleum is the primary mineral resource in Kern County. Land uses surrounding the Proposed Project Study Area are largely designated as agricultural, residential, industrial, or commercial. Kern County has not designated any land surrounding the Proposed Project Study Area as critical to mineral or petroleum resources (Kern County, 2009). Field observations and site exploration data confirm that the Substation Study Area is underlain by deposits consisting mainly of silty sand (SCE TDBU, 2011). A review of U.S. Geological Survey (USGS) data indicate that the majority of the remaining portions of the Proposed Project along the proposed telecommunications facilities are also underlain by Quaternary alluvium, which consists of sand and silt. In addition, short portions of the telecommunications routes are underlain by Mesozoic granite rocks and pre-Cenozoic metasedimentary and metavolcanic rocks undivided (USGS, 2011).

Mines

A review of the USGS Mineral Resources Data System indicated that one mine, Barrett Pit Mine, is located within the Substation Study Area. However, Barrett Pit Mine is located approximately 0.7 mile northwest of the proposed Banducci Substation site and would not be impacted by the Proposed Project. Barrett Pit Mine is designated by USGS Mineral Resources Data System as a past producer of construction material (specifically, sand and gravel). Site observations further confirmed that the mine is not currently active. The location of the Barrett Pit Mine is shown on Figure 4.11-1: Mineral Resources Data.

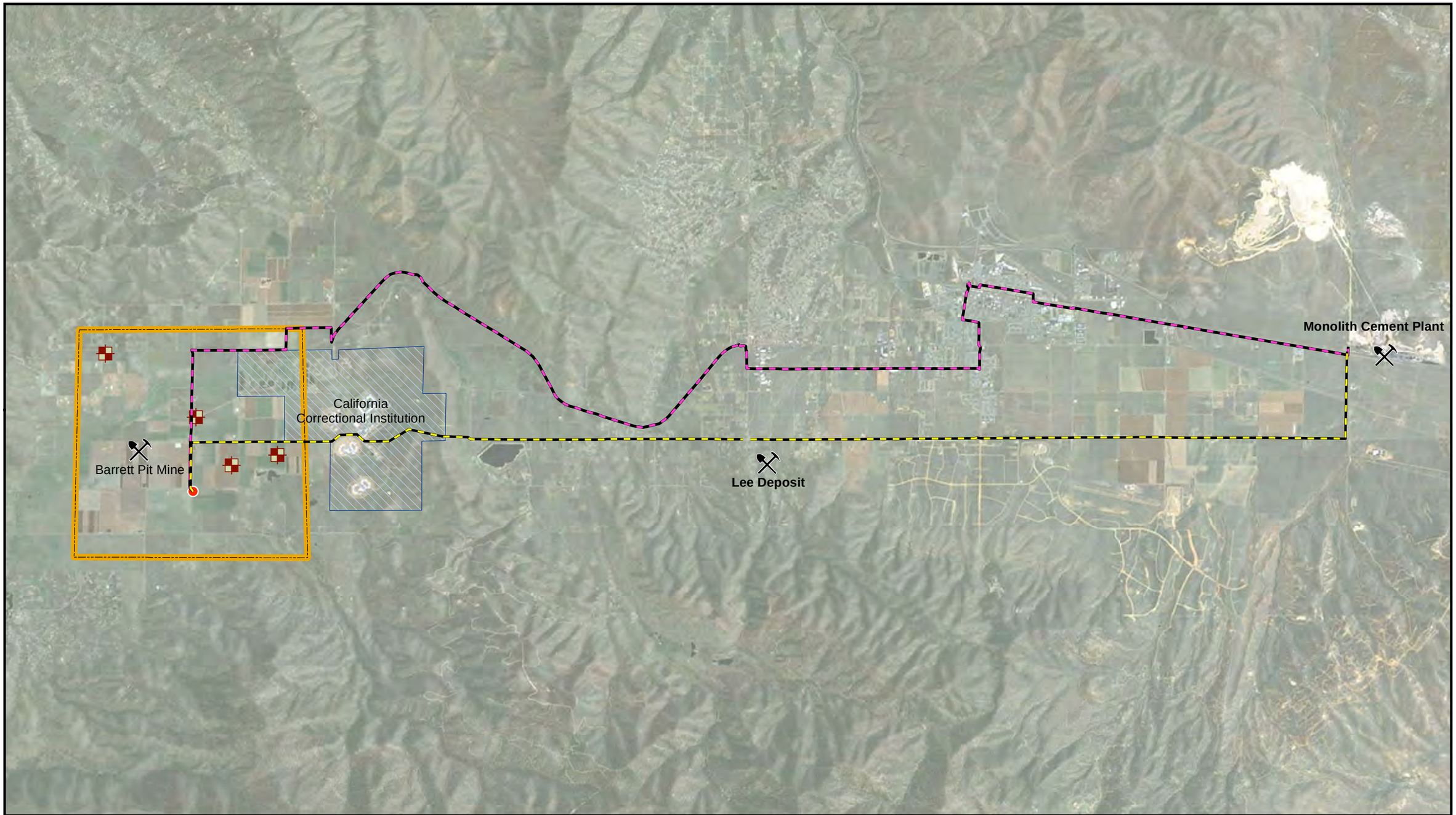
The Monolith Cement Plant is the nearest active mine to the Proposed Project's telecommunication routes. The Monolith Cement Plant is located approximately 0.4 mile slightly north and east of the intersection of the Proposed Telecommunications Routes 1 and 2. In addition the Lee Deposit prospect mine is located approximately 0.25 mile south of the Proposed Telecommunications Route 1.

Oil/Gas

A review of the California Department of Conservation (DOC) Division of Oil, Gas and Geothermal Resources (DOGGR) online mapping system indicated that four oil/gas wells are located in the Substation Study Area; however, none of the oil/gas wells are within the Proposed Project site. In addition, the DOGGR indicates that all four wells within the Proposed Project Study Area are dry wells. The nearest oil/gas well is located approximately 0.3 mile north of the proposed Banducci Substation site. The remaining oil/gas wells are located more than 0.5 mile from the proposed Banducci Substation site. None of the oil/gas wells would be affected by the Proposed Project (DOGGR, 2011; EDR, 2011b).

There are no oil/gas wells directly within the proposed telecommunications routes. The nearest well is a dry well located approximately 350 feet east of the Proposed Telecommunications Route 1 (DOGGR, 2011).

The location of the oil/gas wells are shown on Figure 4.11-1: Mineral Resources Data.



Environmental Intelligence. 19 August 2011. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_11_Mineral_Resources_Data_EI04_20120213.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- Proposed Telecommunications Route 1
- Proposed Telecommunications Route 2
- CA Correctional Institution
- Mineral Resource
- Oil / Gas

N
W E
S

0 1.25 2.5 Miles

***SOURCE**: U.S. Geological Survey. Mineral Resources Data Systems. Bakersfield, California. Retrieved on 19 July 2011 from http://tin.er.usgs.gov/mrds and California Department of Conservation, Division of Oil, Gas, and Geothermal Resources, 2011*

FIGURE 4.11-1: MINERAL RESOURCES DATA
PROPOSED BANDUCCI SUBSTATION PROJECT

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

4.11.2 Regulatory Setting

The regulatory framework discussed in this section identifies the federal, State, regional, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis. These statutes, ordinances, and policies will be considered during the decision-making process to determine the potential for the Proposed Project to result in significant impacts related to mineral resources.

4.11.2.1 Federal

The Proposed Project does not contain any federal lands or components that would require the review or approval of a federal agency; therefore, no federal regulations were reviewed.

4.11.2.2 State

California Surface Mining and Reclamation Act

The California Surface Mining and Reclamation Act (SMARA) requires city and county regulatory agencies (which are referred to in the SMARA as "lead agencies") to adopt ordinances for land use permitting and reclamation procedures. These ordinances (which may be included in the general plan), provide the regulatory framework under which local mining and reclamation activities are conducted. The State Mining and Geology Board (SMGB) reviews these lead agency ordinances to determine whether each ordinance meets or exceeds the California surface mining and reclamation procedures established pursuant to SMARA. The SMGB has the authority to further regulate the authority of the agencies if it finds that the agencies are not in compliance with the provisions of SMARA.

The SMARA further states that the reclamation of mined lands is necessary to prevent or minimize potential adverse effects on the environment and to protect public health and safety. As such, it includes provisions which ensure that

(1) Adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition which is readily adaptable for alternative land uses

(2) The production and conservation of minerals are encouraged, while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment

(3) Residual hazards to the public health and safety are eliminated

4.11.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

The Kern County General Plan (Kern County, 2009) recognizes the importance of mineral resources and has developed policies to protect the current and future extraction of mineral resources that are important to Kern County's economy while minimizing impact of this use to the public and the environment. Kern County emphasizes that lands classified as MRZ-2, as designated by the State of California, should be protected from encroachment of incompatible land uses. Kern County also emphasizes conservation and development of identified mineral deposits and discourages incompatible land use adjacent to map code 8.4 (Mineral and Petroleum) areas.

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along State Route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Consistent with State and County requirements, the GTA Specific and Community Plan (GTASCP) sets forth a land use plan, as well as goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTA.

4.11.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- 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?

- 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?

4.11.4 Impact Analysis

The mineral resources impact analysis for this PEA was evaluated based upon a review of USGS publications (USGS, 2011); California Department of Conservation publications (DOGGR, 2011 and CGS, 2011); Kern County Online Mapping System (2011); Kern County General Plan (Kern County, 2009); GTASCP (Kern County, 2010); site reconnaissance; and interpretation of aerial photographs.

The methodology for completing the mineral resources analysis consisted of identifying the locations of mineral resources within the Proposed Project Study Area in relation to the components of the Proposed Project in order to identify potential conflicts of construction and operation of the Proposed Project with mineral resource extraction.

Would the project 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?

Construction Impacts

No Impact. The Kern County General Plan uses map code 8.4 (Mineral and Petroleum) to designate areas of important mineral resource recovery. There are no areas designated with map code 8.4 within the Proposed Project Study Area or along the proposed telecommunication routes. In addition, a review of the Kern County Online Mapping System indicated no Kern County–permitted mines or historic mines within the Proposed Project Study Area (Kern County Online Mapping, 2011).

As previously discussed in Subsection 4.11.1: Environmental Setting, the Barrett Pit Mine is located within a portion of the Proposed Project Study Area that would not be affected by the Proposed Project. Furthermore, site observations confirmed that this mine is not currently active.

The Monolith Cement Plant contains the nearest active mine to the proposed telecommunications routes. The Monolith Cement Plant is located approximately 0.4 mile slightly north and east of the intersection of the Proposed Telecommunications Routes 1 and 2. In addition, the Lee Deposit prospect mine is located approximately 0.25 mile south of the Proposed Telecommunications Route 1. At these distances from the proposed telecommunications routes, the active mines would not be expected to be impacted by the Proposed Project.

As further discussed in Subsection 4.11.1: Environmental Setting, four oil/gas wells are located in the Proposed Project Study Area; however, none of these wells is within the proposed Banducci Substation site. In addition, all four wells within the Proposed Project Study Area are dry wells. The nearest oil/gas well is located approximately 0.3 mile north of the proposed Banducci Substation site. The remaining oil/gas wells are located more than 0.5 mile from the proposed Banducci Substation site. There are no oil/gas wells located directly within the proposed telecommunication routes. The nearest well is a dry well located approximately 350 feet east of the Proposed Telecommunications Route 1 (DOGGR, 2011). None of these oil/gas wells would be affected by the Proposed Project.

Based on the above considerations, construction of the Proposed Project would not be expected to result in the loss of availability of a locally important mineral resource recovery site.

Operation Impacts

No Impact. As previously noted, the Kern County General Plan designates areas of important mineral resource recovery with map code 8.4 (Mineral and Petroleum). There are no areas designated with map code 8.4 within the Proposed Project Study Area. In addition, a review of the Kern County Online Mapping System indicated no Kern County–permitted mines or historic mines within the Proposed Project Study Area (Kern County Online Mapping, 2011). As discussed in the construction impacts analysis above, there are no known mineral resources within the Proposed Project area. Therefore, operation of the Proposed Project would not result in the loss of availability of a locally important mineral resource recovery site.

Would the project 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?

Construction Impacts

No Impact. There are no known mineral resources within the Proposed Project site. A review of the USGS Mineral Resources Data System indicated that one mine, Barrett Pit, is located within a portion of the Proposed Project Study Area that would not be affected by the Proposed Project (USGS, 2011). Barrett Pit is designated as a past producer, and site observations completed by the environmental team for the Proposed Project have confirmed that the mine is not currently active.

A review of the California DOC DOGGR online mapping system indicated that four oil/gas wells are located in the Proposed Project Study Area; however, no oil/gas wells are located within the proposed Banducci Substation site (DOGGR, 2011). The DOGGR indicates that all four wells within the Substation Study Area are dry wells. The nearest oil/gas well is located approximately 0.3 mile north of the proposed Banducci Substation site. The remaining oil/gas wells are located more than 0.5 mile from the proposed Banducci Substation Site. There are no oil/gas wells located directly within the proposed telecommunication routes. The nearest well is a dry well located approximately 350 feet east of the proposed telecommunications route (DOGGR, 2011). None of the oil/gas wells would be affected by the Proposed Project.

Therefore, construction of the Proposed Project would not result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state.

Operation Impacts

No Impact. As discussed in the construction impacts analysis above, there are no known mineral resources within the vicinity of the Proposed Project site or the proposed telecommunications routes. Therefore, operation of the Proposed Project would not result in the loss of availability of known mineral resources that would be of value to the region and the residents of the state.

4.11.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for mineral resources.

4.11.6 Alternative

Site Alternative B

Site Alternative B is similar in scope to the Proposed Project and is located in a similar setting. As with the Proposed Project, no known mineral resources are present within the Site Alternative B location. As a result, construction and operation of the proposed Banducci Substation at Site Alternative B would not be expected to result in the loss of mineral resources or a mineral resource recovery site. Like the Proposed Project, there would be no anticipated impacts related to mineral resources for Site Alternative B.

4.11.7 References

California Department of Conservation, California Geological Survey (CGS). (2011). *SMARA Mineral Land Classification: Aggregate Availability in California, Map Sheet 52 (Updated 2006).* Retrieved from http://www.conservation.ca.gov/cgs/minerals/mlc/Pages/Index.aspx

California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR). *California Oil and Gas Well Locations.* Retrieved September 19, 2011, from http://maps.conservation.ca.gov/doms/doms-app.html

California Department of Conservation Office of Mine Reclamation (2007). *Surface Mining and Reclamation Act of 1975*. Retrieved July 19, 2011, from http://www.conservation.ca.gov/OMR/Pages/Index.aspx

Environmental Data Resources (EDR). (2011b). *Well Search Report.* Milford, CT.

Environmental Intelligence, LLC. (2011). Site Reconnaissance (Performed June 21 and August 10, 2011).

Kern County. (2010). Greater Tehachapi Area Specific and Community Plan. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kern County. *Kern County online mapping system*. Retrieved July 19, 2011, from http://maps.co.kern.ca.us/imf/imf.jsp?site=krn_pub

Southern California Edison, Transmission and Distribution Business Unit (SCE TDBU) Geotechnical Engineering Group. (2011). *Geotechnical Investigation Report Banducci 66/12kV Substation.* Rosemead, CA.

U.S. Geological Survey (USGS). *Mineral Resources Data Systems*. Retrieved July 19, 2011, from http://tin.er.usgs.gov/mrds/ and http://tin.er.usgs.gov/mrds/show-mrds.php?dep_id=10236382

4.12 NOISE

This section of the PEA provides an analysis of the potential noise impacts associated with the construction and operation of the Proposed Project and its alternatives. In accordance with CEQA Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts.

The noise analysis describes the existing and proposed conditions of noise in the Proposed Project Study Area, evaluates the relevant components and characteristics, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.12.1 Noise Background

This section provides a discussion of the background of noise including noise fundamentals, human perception of noise, sound propagation and attenuation, community noise, and vibration.

Noise Fundamentals

Noise is usually defined as unwanted sound, which implies that it has an adverse effect on people and their environment. The adverse effects of noise include interference with concentration, communication, and sleep. At the highest levels, noise can induce hearing damage.

Noise is measured on a logarithmic scale of sound-pressure level known as a decibel (dB). The human ear does not respond uniformly to sounds at all frequencies; it is less sensitive to very low and high frequencies than to medium frequencies that correspond with human speech. In response, the A-weighted noise level (or scale) has been developed. The A-weighted scale corresponds better to a human being's subjective judgment of sound levels. This A-weighted sound level is called the "noise level" referenced in units of dBA. All sound levels discussed herein are A-weighted.

The A-weighted sound level used for a certain time period is called the equivalent sound pressure level (Leq). The Leq is the level of a constant sound that, in the given situation and time period, has the same sound energy as a time-varying sound.

Human Perception of Noise

The human perception of noise can vary greatly from person to person. In addition to the individual sensitivity to noise, factors that influence individual responses include the intensity, frequency, and time pattern of the noise; the amount of background noise present prior to the intruding noise; and the nature of human activity that is exposed to the noise.

It is widely accepted in the acoustical industry that, for the average person, a change of 3 dBA is perceptible, a change of 5 dBA is readily perceptible, and a change of 10 dBA is perceived as twice as loud as the original source.

Sound Propagation and Attenuation

Individual sound sources are considered "point sources" when the distance from the source is large compared to the size of the source. Sound from a point source radiates hemispherically, which yields a 6 dB sound level reduction for each doubling of the distance from the source. If the sound source is quite long in one dimension, the source is considered a "line source." Sound from a line source radiates cylindrically, which typically yields a 3 dB sound level reduction for each doubling of the distance from the source.

In addition to distance attenuation, the air absorbs a certain amount of sound energy, and atmospheric effects (wind, temperature, precipitation), and terrain/vegetation effects also influence the sound propagation and attenuation over large distances from the source.

Sound levels can also be attenuated by man-made or natural barriers. Intervening noise barriers, such as sound walls, hills, solid walls, or berms, can reduce noise levels up to 15 dBA.

Community Noise

Community noise is usually closely related to human activity. The normal or existing level of community noise at a given location is the composite of noise from all sources, near and far, and is called the "ambient noise level" at that location. Community noise levels are generally considered low when ambient levels are below 45 dBA, moderate in the 45- to 60-dBA range, and high above 60 dBA.

The community noise equivalent level (CNEL) represents a 24-hour Leq, penalized by 5 dBA for the evening time (7:00 p.m. to 10:00 p.m.) and by 10 dBA for the nighttime (10:00 p.m. to 7:00 a.m.). Another noise descriptor termed the day-night average sound level (Ldn) is also used. The Ldn is similar to CNEL, except there is no penalty to the noise level occurring during the evening hours.

Typical A-weighted noise levels for various noise sources are shown in Table 4.12-1: Typical Sound Levels Measured in the Environment and Industry.

Table 4.12-1: Typical Sound Levels Measured in the Environment and Industry

Noise Source	A-Weighted Sound Level in Decibels	Qualitative Description
Civil Defense Siren (100 feet)	130	
Jet Takeoff (200 feet)	120	Threshold of Pain
Auto Horn (3 ft.)	110	Maximum Vocal
Pile Driver (50 feet)	100	Very Loud
Motorcycle (25 feet)/ Diesel Truck (50 feet)	90	Hearing Damage (8-hr continuous exposure)
Garbage Disposal (3 feet)	80	Moderate Loud
Vacuum Cleaner (3 feet)	70	Intrusive
Normal Conversation (3 feet)/Private office	60	
Air Conditioning Unit (20 feet)/Department Store	60	
Light Traffic (100 feet)	50	
Living/Bedroom	40	Quiet
Soft Whisper (5 feet)/Quiet Bedroom	30	Very Quiet
Broadcast/Recording Studio	20	
	10	Just Audible
	0	Threshold of Hearing

Vibration

Construction activities could result in varying degrees of ground vibration, depending on the kind of equipment and operations involved, and the distances between the construction activities and the nearest receptors. The effects of construction vibration may be imperceptible at the lowest levels; low, rumbling sounds and detectable vibrations at moderate levels; and could cause damage to nearby structures at the highest levels. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal and is typically expressed in units of inches per second (in/sec). The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration (FTA, 2006).

4.12.2 Environmental Setting

Potentially Impacted Land Uses

The Proposed Project would be located primarily in a rural area that is defined by largely agricultural uses.

The nearest existing noise-sensitive receptor potentially impacted by the construction and operation of the proposed substation is an occupied residential dwelling located on Pelliser Road approximately 0.25 mile south of the proposed Banducci Substation site.

Occupied residential dwellings potentially impacted by the installation of new poles and replacement of existing poles along the subtransmission line and telecommunication routes are located at various distances from these sites. The nearest occupied residential dwellings are located along South Curry Street, some of which are as close as approximately 25 feet from a pole site along both proposed telecommunications routes.

Existing Noise Sources

The existing primary noise sources in the proposed Substation Study Area include equipment and trucks associated with agricultural activities, and vehicular traffic on Pelliser Road and other roadways in the Proposed Project Study Area.

The nearest public airport is the Tehachapi Municipal Airport which is located more than 9 miles away from the proposed Banducci Substation site and roughly 300 feet north of the nearest section of Proposed Telecommunications Route 2. The closest airstrip is the private landing airstrip at Psk Ranch (located approximately 0.8 mile away), however observations and site reconnaissance from recent visits to the Substation Study Area indicate that this airstrip does not appear to be currently used for aircraft takeoff and landing operations. Neither the airport nor the airstrip are expected to significantly contribute to the existing noise environment within the Proposed Project Study Area. No other noise sources were identified that significantly contribute to the existing noise environment in the Proposed Project Study Area.

Existing Noise Levels

The existing noise environment in the Proposed Project Study Area was monitored on September 23, 2011. The noise measurements were taken with a calibrated Bruel & Kjaer Model 2250 integrating sound-level meter, equipped with a 0.5-inch pre-polarized condenser microphone / pre-amplifier. This sound level meter meets the current American National Standards Institute standard for a Type 1 precision sound-level meter.

The sound-level meter microphone was equipped with a windscreen and positioned at a height of 5 feet above the ground, at approximately 50 feet in distance from the Pelliser Road center line. The short duration (15 minutes) noise level measurements taken at this location indicate that the existing daytime ambient noise levels range between 43 dBA and 62 dBA and the existing nighttime ambient noise levels range between 40 dBA and 56 dBA.

The weather conditions during the measurements were 89 degrees Fahrenheit, 45-percent relative humidity, sunny, and an average wind velocity of 4 miles per hour.

No activities particularly prone to generating vibration were observed in the Proposed Project Study Area during the noise survey site visit.

4.12.3 Regulatory Setting

The regulatory framework discussed in this section identifies the federal, State, regional, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process to determine the potential for the Proposed Project to result in significant impacts related to noise.

4.12.3.1 Federal

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA), Office of Noise Abatement and Control, Federal Noise Control Act of 1972 provides programs and guidelines to identify and address the effects of noise on public health and welfare and the environment. The EPA transferred responsibilities for regulating noise-control policies to State and local government level in 1982.

4.12.3.2 State

State of California

The State of California adopted noise standards in areas of regulation not preempted by the federal government. State standards primarily regulate motor vehicles noise levels, land use/noise compatibility for nonstationary noise sources, sound transmission through buildings, and occupational noise control.

4.12.3.3 Local

The California Public Utilities Commission (CPUC) General Order 131-D, (GO 131-D), Section XIV.B states, "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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County

The two regulatory documents relating to noise are the Kern County General Plan Noise Element and the Kern County Municipal Code. The following sections provide summaries of the noise regulations and policies in the Noise Element and the Municipal Code.

Kern County General Plan Noise Element

The Noise Element of the Kern County General Plan stipulates that industrial, commercial, or other noise-generating projects should be reviewed for compatibility with nearby noise-sensitive land uses. Noise-sensitive land uses identified in the Noise Element include residential areas, schools, convalescent and acute-care hospitals, parks and recreational areas, and churches (Kern County, 2009).

The Noise Element requires proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise-sensitive land uses to exterior noise levels in excess of 65 dB Ldn and interior noise levels in excess of 45 dB Ldn.

Kern County Municipal Code

Kern County's Municipal Code, Chapter 8.36 Noise Control prohibits noise from construction between the hours of 9:00 p.m. and 6:00 a.m. on weekdays, and between the hours of 9:00 p.m. and 8:00 a.m. on weekends if the construction site is within 1,000 feet from an occupied residential dwelling, and is audible to a person with average hearing faculties or capacity at a distance of 150 feet from the construction site.

City of Tehachapi

The City of Tehachapi Municipal Code (Ordinance No. 11-02-708, September 6, 2011) does not include noise or time limits applicable to the Proposed Project's construction and operation. For the purpose of the noise impact evaluation in this section, it has been assumed that the Kern County criteria would apply to the Proposed Project components—that is, some of the telecommunications pole replacement sites—located within the City of Tehachapi.

4.12.3.4 Vibration Impact Regulations

CEQA states that the potential for excessive groundborne noise and vibration levels must be analyzed; however, CEQA does not define the term "excessive." Numerous public and private organizations and governing bodies have provided guidelines to assist in the analysis of groundborne noise and vibration; however, federal, State, and local governments have yet to establish specific groundborne noise and vibration requirements. Additionally, there are no federal, State, or local vibration regulations or guidelines applicable to the Proposed Project.

4.12.4 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to result in impact to the following questions. Would the Proposed Project result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

- 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, the project would expose people residing or working in the project area to excessive noise levels?

- For a project within the vicinity of a private airstrip, the project would expose people residing or working in the project area to excessive noise levels above levels existing without the project?

4.12.5 Impact Analysis

The impact analysis for the Proposed Project has been prepared consistent with the CEQA Guidelines by comparing the Proposed Project's construction and operation with the distance-related noise audibility, construction time restrictions, and land use/noise compatibility criteria in the Kern County Municipal Code and Noise Element.

Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Impacts

Less Than Significant Impact. As discussed above (Section 4.12.3.3), the Kern County Municipal Code prohibits noise from construction between 9:00 p.m. and 6:00 a.m. on weekdays and between 9:00 p.m. and 8:00 a.m. on weekends if the construction site is within 1,000 feet of an occupied residential dwelling and if the construction noise is audible at a distance of 150 feet from the construction site.

The nearest occupied residential dwellings are approximately 0.25 mile from the Proposed Substation site and approximately 25 feet from some pole replacement sites on South Curry Street. Although the subtransmission pole installation sites and telecommunication pole replacement sites are within 1,000 feet from an occupied residential dwelling, and construction noise may be audible at a distance of 150 feet from these construction sites, it is anticipated that construction of the Proposed Project will take place during the Kern County Municipal Code time limits for construction, that is, between 6:00 a.m. and 9:00 p.m. on weekdays and between

8:00 a.m. and 9:00 p.m. on weekends. In the event construction activities are necessary on days or hours outside of what is specified by ordinance (for example, if existing lines must be taken out of service for the work to be performed safely and the line outage must be taken at night for system reliability reasons), SCE would obtain variances as necessary from appropriate jurisdictions where the work would take place.

Because the Proposed Project's construction activities would occur during the time periods allowed by the Kern County Municipal Code or pursuant to a variance, construction of the Proposed Project would result in less than significant impacts related to the exposure of persons to or generation of noise levels in excess of standards established in the local general plan, local noise ordinance, or applicable standards of other agencies.

Operation Impacts

Less Than Significant Impact. As discussed above, the Kern County General Plan Noise Element requires proposed commercial and industrial uses or operations to be designed or arranged so that they will not subject residential or other noise-sensitive land uses to exterior noise levels in excess of 65 dB Ldn and interior noise levels in excess of 45 dB Ldn.

The Proposed Project's primary noise sources during operation would be the transformer banks and subtransmission lines. Operation, maintenance, and emergency repairs, of the proposed Banducci Substation and telecommunications facilities are not anticipated to significantly contribute to the Proposed Project's operational noise levels.

The potential noise impacts from the Proposed Project's subtransmission lines and transformer banks have been analyzed and are discussed in the following sections.

When a transmission or subtransmission line is in operation, an electric field is generated in the air surrounding the conductors forming a "corona." A corona results from the partial breakdown of the electrical insulating properties of the air surrounding the conductors. When the intensity of the electric field at the surface of the conductor exceeds the insulating strength of the surrounding air, a corona discharge occurs at the conductor surface, representing a small dissipation of heat and energy. Some of the energy may dissipate in the form of small local pressure changes that result in audible noise or in radio or television interference. Audible noise generated by corona discharge is characterized as a hissing or crackling sound that may be accompanied by a 120-hertz hum.

Slight irregularities or water droplets on the conductor and/or insulator surface accentuate the electric field strength near the conductor surface, thereby making corona discharge and the associated audible noise more likely. Therefore, audible noise from transmission lines is generally a foul weather (wet conductor) phenomenon. However, during fair weather, insects and dust on the conductors can also serve as sources of corona discharge.

The Electric Power Research Institute (EPRI) has conducted several studies of corona effects (EPRI Transmission Line Reference Books, 1978 and 1987). The typical noise levels for transmission lines with wet conductors are shown in Table 4.12-2: Transmission Line Voltage and Audible Noise Level.

Table 4.12-2: Transmission Line Voltage and Audible Noise Level

Line Voltage (kV)	Audible Noise Level Directly Below the Conductor (dBA)
138	33.5
240	40.4
356	51

KEY: kV = kilovolt

As the Proposed Project subtransmission source lines would be 66 kV, operation of the lines can be predicted to generate less than the 33.5-dBA noise level for a 138-kV transmission line (Table 4.12-2: Transmission Line Voltage and Audible Noise Level). This less than 33.5 dBA noise level would be well below the 65 dB Ldn exterior noise and 45 dB Ldn interior noise level Noise Element criteria applicable to residential or other noise-sensitive land uses.

Therefore, noise levels from the Proposed Project's subtransmission lines would not result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The noise impact from operation of the proposed subtransmission lines would be less than significant.

The primary noise sources at the proposed Banducci Substation would be the transformer banks. Transformer banks, along with cooling fans and oil pumps needed to cool the transformers during periods of high electrical demand, typically generate steady noise during operation.

The proposed Banducci Substation would include two 66/12-kV transformer banks, each with a capacity of 28 megavolt ampere (MVA). In accordance with the National Electrical Manufacturers Association (NEMA) Standards Publication No. TR 1-1993 (R2000), the design sound level of each 66/12-kV transformer bank would not exceed 74 dBA. This 74 dBA sound level represents the transformer bank's average design sound pressure level, defined in NEMA Standards Publication No. TR 1-1993 (R2000) and ANSI/IEEE Standard C57.12.90-2010.

The transformer banks would be purchased consistent with SCE Specification A1-2009, which requires the transformer banks' sound-pressure level to be at least 6 dB below the 74-dBA design sound-pressure level specified in NEMA Standards Publication No. TR 1. As a result, the highest average sound-pressure level for each transformer bank is not expected to exceed 68 dBA. Using the calculation methodology outlined in the ANSI/IEEE Standard C57.12.90-2010, the calculated sound-power level for the transformer banks would be 84 dBA.[1]

[1] Sound Power Level is the sound energy radiated by the transformer, producing a Sound Pressure Level at the receptor location

The nearest noise-sensitive receptor potentially impacted by the transformer banks' noise level is an occupied residential dwelling on Pelliser Road, approximately 0.25 mile south of the proposed Banducci Substation site. Using the calculation methodology outlined in the ANSI/IEEE Standard C57.12.90-2010, the calculated combined sound-pressure level of the two transformer banks would be 27 dBA at this nearest noise-sensitive receptor location.

The transformer banks' 27-dBA noise level at the nearest noise-sensitive receptor location would be well below the 65 dB Ldn exterior noise and 45 dB Ldn interior noise level criteria of Kern County's Noise Element for residential or other noise-sensitive land uses. In addition, the proposed Banducci Substation would be enclosed by an 8-foot-high masonry perimeter wall, which would further reduce the substation's equipment off-site noise levels.

Therefore, noise levels from operation of the Proposed Project's transformer banks would not result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The noise impact from transformer banks would be less than significant.

Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Construction Impacts

Less Than Significant Impact. Groundborne vibration or noise levels generated by construction equipment during construction of the Proposed Project would occur with varying intensities and durations during the various phases of construction. Construction activities, such as tamping ground surfaces, drilling, and passing heavy trucks on uneven surfaces, may produce minor groundborne noise or vibration in the immediate vicinity of the construction activity. Impacts from construction-related groundborne noise or vibration, should they occur, would be intermittent and confined to the immediate area surrounding the activity.

Groundborne vibration or noise level impacts from construction activities are considered significant if they cause damage to structures, or cause sleep disturbance if such activities occur at night near residential areas. According to the Federal Transit Administration (FTA) guidelines, a vibration level of 65 VdB is the threshold of perceptibility for humans. For a significant impact to occur, vibration levels must exceed 80 VdB during infrequent events (FTA, 1995). Based on the levels published by the FTA (FTA, 2006) and the type of equipment proposed for use at the Proposed Project, coupled with the distance to the existing identified noise-sensitive receptors, analysis shows that all identified sensitive receptors would be below the maximum vibration level of 65 VdB.

Therefore, the Proposed Project's construction would not result in the exposure of persons to or generation of excessive groundborne vibration or noise levels. The impact would be less than significant.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would consist of routine maintenance activities and emergency repairs. It is unlikely that these activities would produce significant groundborne noise or vibration. Operation of transformers at the proposed Banducci Substation may produce groundborne vibration; however, groundborne vibrations would be perceptible only in the immediate vicinity (that is, less than 25 feet) of the transformer pad, if at all. No other component of the Proposed Project would generate vibrations during operation.

Therefore, operation of the Proposed Project would not result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. The impact would be less than significant.

Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction Impacts

Less Than Significant Impact. The Proposed Project's construction would be of short duration and would not cause a substantial permanent increase in ambient noise levels in the vicinity above existing levels. The impact would be less than significant.

Operation Impacts

Less Than Significant Impact. The primary permanent noise sources that would occur with the Proposed Project are limited to the proposed subtransmission lines and transformer banks at the proposed Banducci Substation. Operation of the proposed distribution and the proposed telecommunications facilities would not generate significant noise levels.

As discussed above, the Proposed Project subtransmission source lines would generate less than 33.5 dBA below the transmission line conductors and would consequently not result in a substantial permanent increase of the 40-dBA nighttime lowest existing ambient noise level monitored in the Proposed Project Study Area.

Therefore, the Proposed Project subtransmission source lines would not result in a substantial permanent increase in ambient noise levels in the project vicinity above existing levels. The impact would be less than significant.

As discussed above, the highest average sound-pressure level for each transformer bank is expected not to exceed 68 dBA, resulting in sound power level of 84 dBA. The transformer banks would be located near the center of the proposed Banducci Substation's 440-foot-by-346-foot footprint, with the substation's nearest property line located at approximately 170 feet distance from the 8-foot-high masonry perimeter wall.

Using the calculation methodology outlined in the ANSI/IEEE Standard C57.12.90-2010, the calculated combined sound-pressure level of the two transformer banks would be 45 dBA at the substation's nearest property line.

Assuming a 5-dBA sound attenuation by the 8-foot-high masonry block wall surrounding the proposed Banducci Substation site, the highest combined noise level of the two transformer banks simultaneously operating at maximum load capacity is estimated not to exceed 40 dBA at the substation property line. The transformer banks' 40-dBA noise level at the substation's nearest property line would not result in a substantial permanent increase of the 40-dBA nighttime lowest existing ambient noise level monitored in the Proposed Project Study Area.

Therefore, the Proposed Project's transformer banks would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the Proposed Project. The impact would be less than significant.

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction Impacts

Less Than Significant Impact. Noise generated by construction equipment would occur with varying intensities and durations during the various phases of construction. Typical maximum noise levels for construction equipment at 50 feet from the source are shown in Table 4.12-3: Typical Construction Equipment Noise Levels (FTA, 2006).

Table 4.12-3: Typical Construction Equipment Noise Levels

Equipment	Maximum Noise Level at 50 Feet (dBA)
Backhoe	80
Concrete mixer	85
Pump truck	82
Crane, Mobile	83
Dozer	85
Excavator	85
Generator	81
Grader	85
Man lift	85
Loader	85
Paver	89
Roller	85
Scraper	89
Trucks	74-88

The data shown in Table 4.12-3: Typical Construction Equipment Noise Levels indicate the maximum construction equipment noise levels range between 74 and 89 dBA at 50 feet distance from the equipment. These noise levels represent the construction equipment's *maximum* noise levels, with the equipment operating under full-load conditions. Most construction equipment operates in alternating cycles of full power and low power, thus producing noise levels less than the maximum noise levels shown in Table 4.12-3: Typical Construction Equipment Noise Levels. The average noise level of the construction activity also depends upon the amount of time that the equipment operates and the intensity of the construction during the time period.

Consequently, the average sound level at construction sites is typically less than the equipment's maximum noise levels.

The nearest occupied residential dwelling potentially impacted by the construction at the proposed Banducci Substation site is located on Pelliser Road approximately 0.25 mile south of the proposed Banducci Substation site. The construction equipment distance sound attenuation for 0.25 mile would be 29 dBA, resulting in maximum noise levels ranging between 45 to 60 dBA at this location.

The nearest occupied residential dwellings potentially impacted by the installation of new and replacement of existing poles along the subtransmission line and telecommunication routes are located along South Curry Street approximately 25 feet from the pole replacement site. The maximum noise levels resulting from the pole installation and replacement (excavator or backhoe) activities could range between 86 to 91 dBA at these locations.

However, due to the short-term duration of the construction activities, and because the construction activities would occur during the time periods allowed by the Kern County Municipal Code or pursuant to a noise variance, construction noise levels would result in a less than significant impact.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would consist of routine, short-term inspection and maintenance of the facilities. Although the proposed Banducci Substation would be unstaffed and remotely monitored, routine maintenance activities would occur up to three to four times per month and would consist of testing, monitoring, and repairing equipment. The wall surrounding the proposed Banducci Substation would result in noise attenuation. Maintenance of the proposed subtransmission source line segments would occur on an as-needed basis, and activities would include repairing conductors, replacing insulators, replacing poles, and maintaining the access roads. These limited operational activities would not be expected to generate noise levels that would contribute to a substantial temporary increase in ambient noise in the area.

Therefore, the operation of the Proposed Project would not result in a substantial temporary or periodic increase in ambient noise levels in the Proposed Project vicinity above existing levels. Impacts would be less than significant.

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 expose people residing or working in the project area to excessive noise levels?

Construction Impacts

Less than Significant Impact. Portions of SCE's construction activities along the telecommunications routes would occur within an area located in the Tehachapi Airport Master Plan Update, SCE would be required under 49 CFR Part 77 to notify the FAA to ensure that

construction of the Proposed Project would not be expected to expose people residing or working during construction or operation to excessive noise levels attributable to a public airport or public use airport. The proposed Banducci Substation site is not located within an airport land use plan or within 2 miles of a public airport. Therefore, the Proposed Project would not expose people residing or working during construction or operation to excessive noise levels attributable to a public airport or public use airport, as impacts would be less than significant.

Operation Impacts

Less than Significant Impact. Operational activities associated with the Proposed Project would not be expected to interfere with a public airport or public use airport or create noise impacts. The proposed Banducci Substation would be unstaffed and maintenance personnel would only access the Proposed Project substation and telecommunication sites periodically. Therefore, the Proposed Project would not expose people residing or working during construction or operation to excessive noise levels attributable to a public airport or public use airport, as impacts would be less than significant.

For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Construction Impacts

No Impact. There are no active private airstrips located within the vicinity of the Proposed Project. Therefore, the Proposed Project would not expose people residing or working during construction to excessive noise levels attributable to a private airstrip. Consequently, there would be no impact.

Operation Impacts

No Impact. There are no active private airstrips located within the vicinity of the Proposed Project. Therefore, the Proposed Project would not expose people residing or working during operation to excessive noise levels attributable to a private airstrip. Consequently, there would be no impact.

4.12.6 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for noise.

4.12.7 Alternative

Site Alternative B

Site Alternative B is located on the northeast corner of Pelliser Road and unimproved Highline Road. Site Alternative B is located at a shorter distance - approximately 200 feet away from the nearest existing occupied residential dwelling. This would potentially result in higher construction and operational noise levels at this location. However, overall noise impacts would not substantially change with construction and operation of the Site Alternative B as compared to

the Proposed Project because construction and operation activities would be similar for both sites. The different proposed substation locations would not substantially affect the distance from residents to the telecommunications routes as the routes would not change.

Consequently, the level of significance, pursuant to CEQA, of potential noise impacts for the Site Alternative B would be the same as for the Proposed Project.

4.12.8 References

Electrical Power Research Institute (EPRI). (1978 and 1987). *EPRI Transmission Line Reference Books.* Charlotte, NC.

Federal Transit Administration (FTA). (2006). *Construction Equipment Noise Levels.* Washington, DC.

Institute of Electrical and Electronic Engineers (IEEE). (2004). *IEEE Std. 1127-1998 (R2004).* New York, NY.

Kern County. (2009). *Kern County General Plan (Chapter 3, Noise Element)*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kern County. (2012). *Kern County Municipal Code (Chapter 8.36, Noise Control)*. Bakersfield, CA: Kern County Planning and Community Development Department.

4.13 Population and Housing

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential population and housing related impacts associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of population and housing in the Proposed Project Study Area, evaluates the population and housing characteristics, and assesses impacts that have the potential to occur as a result of the Proposed Project.

4.13.1 Environmental Setting

The Kern County Regional Housing Allocation Plan was adopted by the Kern Council of Governments in 2001 to identify the housing and development needs and to provide a long-term comprehensive plan to address those needs throughout Kern County (Kern COG, 2001). According to the Kern County Regional Housing Allocation Plan, the Proposed Project, including the proposed Banducci Substation and the proposed telecommunications facilities, would be located in the Kern County Regional Planning Area 6, the Tehachapi Planning Area. The Kern County Regional Housing Allocation Plan provides population, housing, and employment statistics that are presented along with information from the U.S. Census Bureau in this subsection.

Population

Kern County is 8,132 square miles and has a population density of approximately 103 persons per square mile (U.S. Census Bureau, 2011). Kern County's population was approximately 543,477 in 1990. Over the past two decades, the population within Kern County has increased by an estimated 296,154 people, an increase of 54 percent over 1990 levels (U.S. Census Bureau, 2011). The population is expected to continue to increase by approximately 42 percent over the next two decades (Table 4.13-1: Historical and Estimated Population). A majority of the Proposed Project Study Area is located within sparsely populated and largely agricultural areas within Kern County.

Table 4.13-1: Historical and Estimated Population

Area	Year					
	1990	2000	2010	2020	2030	2010–2030 Change
Kern County	543,477	661,649	839,631	950,112	1,114,878	275,247 (42%)

SOURCE: Kern Council of Governments, 2000; U.S. Census Bureau, 2011

Population within the Tehachapi Planning Area grew by more than 33 percent from the year 1990 to the year 2000 (Kern COG, 2001). However, much of the growth was attributed to the annexation of the California Correctional Institution, which is located east of the Substation Study Area in the City of Tehachapi (Kern COG, 2001).

Housing

According to the census data provided by the Kern County Council of Governments for the year 2000, Kern County had a total of 232,000 housing units, 13.8 percent of which were vacant (Kern COG, 2000). Of the total housing units, 71 percent were single-unit structures, 20 percent were multiunit structures, and 9 percent were mobile homes (Kern COG, 2000). Twenty-one percent of the housing units were built since 1990 (Kern COG, 2000).

In 1990, approximately 16 percent of the homes located in the Tehachapi Planning Area were vacant (Kern COG, 2001). The Kern County Regional Housing Allocation Plan attributes most of the vacancy to individuals with second homes (Kern COG, 2001). There are no structures within the proposed Banducci Substation site and there are few residences located within or adjacent to the Substation Study Area. The closest residence is located 0.3 mile south of the proposed Banducci Substation site. The concentration of housing nearest to the proposed Banducci Substation site is the Stallion Springs community, a census-designated place with a population of 2,488 people (U.S. Census Bureau, 2011). Stallion Springs is located approximately 2 miles southwest of the proposed Banducci Substation location. The City of Tehachapi contains homes that are located near the proposed telecommunications facilities. However, all of the homes are located outside of the existing SCE right-of-way (ROW).

Employment

Employment within the Tehachapi Planning Area includes a variety of professions including resource extraction, renewable energy generation, building material production, agricultural tasks, and a considerable amount of work within the California Correctional Institution (Kern COG, 2001). A number of people also find employment in the surrounding areas of Bakersfield and the Antelope Valley (Kern COG, 2001). Between the years of 1990 and 2000, employment in the Tehachapi Planning Area increased by 70 percent (Kern COG, 2001). Employment in the Tehachapi Planning Area was estimated to grow by more that 142 percent by the year 2020. It is anticipated that the employment forecast may have shifted due to the shifts in the economy since that time. However, the two most-significant employment trends within the Tehachapi Planning

Area include (1) individuals commuting to neighboring cities to find work and (2) a considerable amount of employment opportunities within the California Correctional Institution would not likely be significantly disrupted by the changes in the economy for several reasons. Employment in California and within Kern County has gradually increased in recent years (CEDD, 2011). Kern County has also facilitated the ability for individuals to commute to work with ease through the availability of alternative transportation, improvements to public transportation, and increased awareness of public transportation accessibility and other alternatives, which are described in detail in the Kern Commuter Connection program (Kern COG, 2012). The incarceration rates for the adult population in California have increased, affecting employment trends within the California Correctional Institution. In addition, between the years of 2000 and 2009, criminal justice personnel and crime rates (excluding arson) within Kern County have increased, also affecting employment trends within the California Correctional Institution (California Department of Justice, 2012).

4.13.2 Regulatory Setting

The regulatory framework discussed in this section identifies the federal, State, regional, and local statutes, ordinances, or policies reviewed during the preparation of this analysis and that will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to population and housing.

4.13.2.1 Federal

The Proposed Project does not contain any federal lands or components that would require the review or approval of a federal agency; therefore, no federal regulations were reviewed.

4.13.2.2 State

There are no State regulations, plans, and standards for population and housing that apply to the Proposed Project.

4.13.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Recognizing the importance of accommodating future growth and development, Kern County and has developed goals to ensure that it can accommodate such growth while maintaining a safe, healthful environment and a prosperous economy. As part of its accommodation efforts, Kern County utilizes its General Plan as a means for preserving valuable natural resources, guiding development away from hazardous areas, and ensuring the provision of adequate public services (Kern County, 2009).

The Housing Element of the Kern County General Plan provides background information regarding housing and general policy guidance. The Kern County Housing Element includes goals, policies, and programs that Kern County intends to implement to address the community's identified housing needs and issues. As the Proposed Project would not include new housing, the goals and policies of the housing element largely do not apply to the Proposed Project.

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe a collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan, goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

Chapter 8 of the GTASCP states that issues relating to housing within the GTA should reference the Kern County Housing Element for direction.

4.13.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

4.13.4 Impact Analysis

The evaluation of population and housing examined baseline population, housing, and employment data for the Proposed Project Study Area and analyzed the potential direct and indirect impacts of construction and operation of the Proposed Project. Current demographic data was obtained from the U.S. Census Bureau. Forecasted population, housing, and employment data are presented based on the most recently published Kern COG projections for jurisdictions, subregional areas, and major statistical areas, where available (Kern COG, 2000). Additional baseline conditions of the Proposed Project Study Area were determined from site reconnaissance and satellite imagery. The significance of potential impacts to the Proposed Project Study Area is determined based on the significance criteria listed in Appendix G of the CEQA Guidelines.

Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Construction Impacts

No Impact. Construction of the Proposed Project would not be anticipated to significantly induce population growth. The purpose of the Proposed Project is to serve the existing and anticipated population within SCE's Electrical Needs Area to meet projected load requirements, as described in Chapter 1.0, Purpose and Need, of this PEA. Construction activities would occur at various locations along the proposed telecommunications routes and at the proposed Banducci Substation site, over an approximate 12-month period. During this time, SCE's personnel and contractors (under the supervision of SCE personnel) would perform construction tasks required for the Proposed Project. This work force would consist primarily of local workers and workers who would commute to either staging areas or construction sites and would return to their respective homes or existing hospitality accommodations at the end of their shifts. It would be anticipated that a maximum of 50 workers would work on the Proposed Project at any given time during construction of the Proposed Project. These individuals would work at various locations across the Proposed Project areas. Construction of the Proposed Project would not require a large temporary workforce that might displace existing housing or people, necessitate relocation, or necessitate the construction of replacement housing elsewhere. If any nonlocal workers are to be employed, they would likely commute from within the City of Tehachapi or nearby communities and may only require temporary accommodations (if any), which would be met by the existing hospitality accommodations, such as local hotels or motels. As such, construction of the Proposed Project would not increase the demand for housing in the Proposed Project area and would not directly or indirectly induce population growth in the area.

Operation Impacts

No Impact. Operation of the Proposed Project would not be anticipated to result in population growth in the area. The proposed Banducci Substation would be automated, unattended, and operation of the Proposed Project would not require any regular staffing. Maintenance would occur as needed and would include activities such as repairing conductors, replacing insulators, replacing poles, and access road maintenance. Maintenance along the proposed telecommunications infrastructure would be routine efforts that would be completed by small SCE crews (or contractors as needed). These efforts would not require a substantial workforce to complete. As such, the Proposed Project would not create any new employment opportunities that would potentially require additional housing or encourage an increase in the population in the area. Therefore, operation of the Proposed Project would be expected to result in no impacts related to inducing population growth.

Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Construction Impacts

No Impact. Construction of the Proposed Project would not impact the existing housing within the area and would not conflict with the existing or planned housing. The Proposed Project would be constructed on agricultural land and within existing SCE ROWs and would not require the removal of any existing residences. The Proposed Project does not contain components that would require the displacement of existing housing and would therefore not result in impacts related to population and housing.

Operation Impacts

No Impact. Operation of the Proposed Project would not require the displacement of any existing housing. The proposed Banducci Substation would be automated and unstaffed, and operation of the Proposed Project would not require regular staffing. Maintenance would occur as needed and would include activities such as repairing conductors, replacing insulators, replacing poles, and maintaining access roads. These tasks would not displace existing housing. Therefore, operation of the Proposed Project would not require the construction of replacement housing elsewhere.

Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Construction Impacts

No Impact. There are no residences located within the Proposed Project construction areas. Construction of the Proposed Project would not displace any residents or result in the removal of any residences in Kern County. As a result, construction of the proposed project would not require the construction of replacement housing elsewhere. Therefore, construction of the

Proposed Project would not result in impacts related to displacing substantial numbers of people that would necessitate construction of replacement housing.

Operation Impacts

No Impact. As with construction, operation of the Proposed Project would not displace any people. The proposed Banducci Substation would be automated and unstaffed, and operation of the Proposed Project would not require regular staffing. Maintenance would occur as needed and would include activities such as repairing conductors, replacing insulators, replacing poles, and maintaining access roads. This work would be temporary and would not displace any residents in the area. Therefore, operation of the Proposed Project would not require the construction of replacement housing.

4.13.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for population and housing.

4.13.6 Alternative

Site Alternative B

The Site Alternative B substation location has a similar setting and is similar in scope to that of the Proposed Project. Like the Proposed Project, at Site Alternative B, the proposed Banducci Substation would be developed to serve an existing need in the area. Also like the Proposed Project, the proposed Banducci Substation at this location would be automated and unstaffed and would not require regular staffing. Site Alternative B would not induce population growth. One structure, a residential building that is being used as a commercial office for a sod farm operation, is currently located at the Site Alternative B. Use of this site for the proposed Banducci Substation would require removal of the structure, but removal of the structure would not displace a substantial number of people or residences and would not require the construction of replacement housing elsewhere. As a result, like the Proposed Project, there would be no impacts to population and housing for Site Alternative B.

4.13.7 References

California Employment Development Department (CEDD). (2011). *California Labor Market Review.* Sacramento, CA.

Kern Council of Governments (Kern COG). (2001). *Kern County Regional Housing Allocation Plan.* Retrieved from http://www.kerncog.org/pdf/RHAP_00.pdf

Kern Council of Governments (Kern COG). (2000). *Census*. Retrieved September 22, 2011, from http://www.kerncog.org/cms/

Kern Council of Governments (Kern COG). (2012). *Kern Commuter Connection.* Retrieved January 31, 2012, from http://www.kerncog.org

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

State of California Department of Justice. (2012). *Statistics.* Retrieved January 31, 2012, from http://ag.ca.gov/cjsc/statisticsdatatabs/PersoCo.php

U.S. Census Bureau. (2011). Website. Retrieved 22 September 2011 from http://www.census.gov

4.14 Public Services

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to public services associated with the construction and operation of the proposed Banducci Substation and ancillary facilities (Proposed Project) and its alternatives. In accordance with the CEQA Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination whether the Proposed Project would result in significant environmental impacts related to public services.

This analysis describes the existing and proposed conditions of public services in the Proposed Project Study Area, evaluates the public services characteristics, and assesses the potential impacts that have the potential to occur as a result of the Proposed Project.

4.14.1 Environmental Setting

Fire Protection

The Kern County Fire Department (KCFD) provides fire protection services for the Proposed Project area. The Kern County Fire Department serves a population of more than 580,000 people and an area of more than 8,000 square miles (KCFD, 2011). The KCFD has more than 546 uniformed firefighters and operates out of 46 fire stations throughout Kern County (KCFD, 2011). The closest fire station to the Proposed Project site is the Tehachapi Fire Station 12, Crew 81, which is located at 800 South Curry Street in Tehachapi, California. The Tehachapi Fire Station has a service area of 220 square miles, including the proposed Banducci Substation site and is located approximately 9 miles northeast of the proposed Banducci Substation location and 25 feet east of the nearest proposed telecommunications facilities. The Tehachapi Fire Station would respond to emergency and fire related events for the Proposed Project.

Police Protection

The Kern County Sheriff's Office would provide police services to the proposed Banducci Substation and the area surrounding it. The Kern County Sheriff's Office provides public safety services to areas of unincorporated Kern County, including the site of the proposed Banducci Substation, the neighboring California Correctional Institution (CA Correctional Institution), and the area surrounding the correctional institution. The Kern County Sheriff's Office has 1,239 sworn and civilian employees (KCSO, 2011). Besides the sheriff's personnel located at the California Correctional Institution, the Tehachapi County Substation is the closest Kern County Sheriff's Office location to the proposed Banducci Substation site and is situated roughly 6 miles northeast of the proposed Banducci Substation site and 0.56 mile northwest of the nearest proposed telecommunications route..

The Tehachapi Police Department provides law enforcement services to the City of Tehachapi. This department has a staff of approximately 11 full-time sworn personnel. The Tehachapi Police Department would provide police services to locations within its jurisdiction where telecommunications facilities would be installed as part of the Proposed Project.

In addition, the Bear Valley Police Department also operates within the vicinity of the Proposed Project. The Bear Valley Police Department provides law enforcement services for the Bear Valley Community Services District's property limits, which extend into and around the Cummings Valley area. Bear Valley Police Officers also assist neighboring districts and the City of Tehachapi when additional law enforcement support is necessary. Table 4.14-1: Police Stations within the Proposed Project Vicinity, provides information related to the police stations located within the vicinity of the Proposed Project.

Table 4.14-1: Police Stations within the Proposed Project Vicinity

Police Station	Location	Approximate Distance from Proposed Banducci Substation Site	Approximate Distance from Nearest Telecommunications Facilities
Kern County Sheriff's Department (Tehachapi Substation)	22209 Old Town Road, Tehachapi, CA	6 miles northeast	0.56 mile northwest
Bear Valley Police Department	25101 Bear Valley Road, Tehachapi, CA	3 miles northeast	0.58 mile north
Tehachapi Police Department	129 East "F" Street, Tehachapi, CA	8.97 miles northeast	0.16 mile south

Schools

Educational services in the vicinity of the Proposed Project are provided through the Tehachapi Unified School District. There are three elementary schools, one middle school, and two high schools located in the Tehachapi Unified School District (Kern County Superintendent of School [KCSS], 2011). The nearest school to the proposed Banducci Substation site would be Cummings Valley Elementary School, which is located approximately 2.6 miles northeast of the proposed Banducci Substation site. The nearest school to the proposed telecommunications facilities of the Proposed Project is Monroe High (Continuation) School, which is located approximately 155 feet east of the nearest proposed telecommunications facilities. Table 4.14-2: Schools within the Proposed Project Vicinity, provides an overview of the public schools, locations, grades, as well as the distance of each school from the Proposed Project components.

Table 4.14-2: Schools within the Proposed Project Vicinity

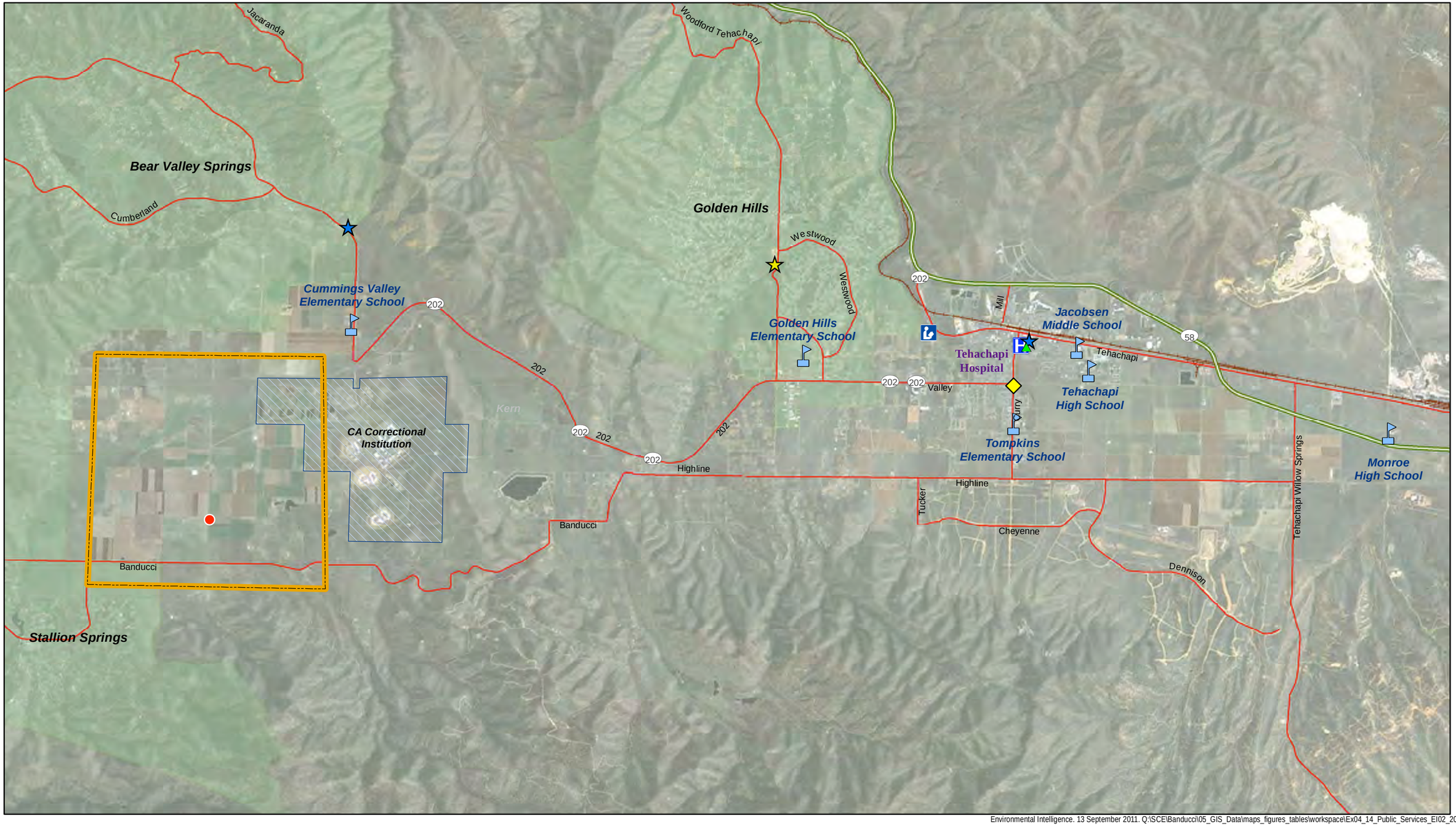
School Name	Location	Grades	Approximate Distance from Proposed Banducci Substation Site	Approximate Distance from Nearest Telecommunications Facilities
Cummings Valley Elementary	24220 Bear Valley Road, Tehachapi, CA	K through 5	2.6 miles northeast	0.39 mile north
Golden Hills Elementary	20215 Park Road, Tehachapi, CA	K through 5	6.56 miles northeast	0.54 mile north
Tompkins Elementary	1120 South Curry Street, Tehachapi CA	K through 5	8.67 miles northeast	0.17 mile south
Jacobsen Middle	711 Anita Drive, Tehachapi, CA	6 through 8	9.50 miles northeast	242 feet south
Monroe High (Continuation)	20569 Eumatilla Road, Tehachapi, CA	9 through 12	12.07 miles northeast	155 feet east
Tehachapi High	801 South Dennison Road Tehachapi, CA	9 through 12	9.74 miles northeast	0.50 mile north

Parks

There are a number of parks and recreational areas located in the vicinity of the Proposed Project. The closest recreational area is the Brite Valley Aquatic Recreation Area, which is located in Tehachapi, California approximately 3 miles northeast of the proposed Banducci Substation site and 200 feet south of the proposed telecommunications facilities. Other parks in the vicinity of the Proposed Project include but are not limited to: the Tehachapi City Park, Tehachapi Mountain Park, and Meadowbrook Park. In addition to these areas, there are a number of parks and recreational areas that are located near the Proposed Project's region, including but not limited to: the Kern River State Park, Sequoia National Forest, and Angeles National Forest. Public parks, open spaces, and recreational areas in the vicinity of the Proposed Project components are described in detail in Section 4.15, Recreation of this PEA.

Other Public Facilities

Additional public services in the Proposed Project area include medical, postal, and library facilities. Medical services are provided at the Tehachapi Hospital which is located approximately 9 miles northeast of the proposed Banducci Substation site and 940 feet northeast of the nearest proposed telecommunications facilities component at 115 West East Street, Tehachapi, California. The nearest U.S. Post Office to the Proposed Project is located roughly 9 miles northeast of the proposed Banducci Substation site and 0.2 mile northeast of the nearest proposed telecommunications facilities component. The nearest public library is located approximately 8 miles northeast of the proposed Banducci Substation site and 0.7 mile west of the nearest proposed telecommunications facilities component. The above referenced public facilities are depicted in Figure 4.14-1: Public Services in the Proposed Project Vicinity.



Environmental Intelligence. 13 September 2011. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_14_Public_Services_EI02_20111213.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- School
- Hospital
- Post Office
- Police
- Sheriff
- Fire Department
- Library
- Freeway / Major Highway
- Major Road / Minor Highway

N W E S

0 0.5 1 2 Miles

Figure 4.14-1: Public Services in the Proposed Project Vicinity

Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

4.14.2 Regulatory Setting

The regulatory framework that is discussed below in this section identifies the State, regional, and local statutes, ordinances, or policies that were reviewed during the preparation of this analysis and will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to public services.

4.14.2.1 Federal

There are no federal regulations, plans, or standards applicable to the Proposed Project.

4.14.2.2 State

California Fire Code

The California Code of Regulations (CCR), Title 24, Part 9 is known as the California Fire Code. This code provides provisions for planning, precautions, and preparations for fire safety and fire protection during various activities, including, but not limited to, construction and demolition, as well as requirements for buildings and guidelines for working with flammable chemicals and materials. The Proposed Project would be located in an area that has a moderate to high fire hazard potential. As such, the California Fire Code was reviewed for this analysis.

California Public Resources Code Sections 4292 and 4293

California Public Resources Code (CPRC) Section 4292 states

> any person that owns, controls, operates, or maintains any electrical transmission or distribution line…shall, during such times and in such areas as are determined to be necessary by the director or the agency, has primary responsibility for fire protection of such areas, maintain around and adjacent to any pole or tower which supports a switch, fuse, transformer, lightening 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 a pole or tower (CPRC 4292).

CPRC 4293 states

> any person that owns, controls, operates, or maintains any electrical transmission or distribution line upon any mountainous land, or in forest-covered land, or grass-covered land shall, during such times and in such areas as are determined to be necessary by the director or the agency which has primary responsibility for the fire protection of such area, maintain a clearance of the respective distances which are specified in this section in all directions between all vegetation and all conductors which are carrying electric current:

(a) For any line which is operating at 2,400 or more volts, but less than 72,000 volts, four feet
(b) For any line which is operating at 72,000 or more volts, but less than 110,000 volts, six feet
(c) For any line which is operating at 110,000 or more volts, 10 feet

In every case, such distance shall be sufficiently great to furnish the required clearance at any position of the wire, or conductor when the adjacent air temperature is 120 degrees Fahrenheit, or less. Dead trees, old decadent or rotten trees, trees weakened by decay or disease and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard (CPRC 4293).

Red Flag Fire Warning and Weather Watches

Like CPRC Sections 4292 and 4293, red-flag warnings and fire-weather watches aim to prevent fire events and reduce the potential for substantial damage. When extreme fire weather or behavior is present or predicted in an area, a red-flag warning or fire-weather watch may be issued to advise local fire agencies that these conditions are present. The National Weather Service issues the red flag warnings and fire weather watches and the California Department of Forestry and Fire Protection (CAL FIRE) has provided safety recommendations for preventing fires, including clearing and removing vegetation, and ensuring the proper use of equipment.

4.14.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County recognizes the importance of environmental and public health and has developed policies to protect the public health and safety in the Kern County General Plan. Kern County has policies that encourage availability of adequate emergency services and facilities to the residents of Kern County through the coordination, planning, and development of emergency facilities and services (Kern County, 2009).

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe a collection of unincorporated communities located in eastern Kern County along SR 58 between the San Joaquin valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Consistent with State and County requirements, the GTA Specific and Community Plan (GTASCP) sets forth a land use plan and goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

4.14.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following question is considered. Would the Proposed Project:

- 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 public services: fire protection, police protection, schools, parks, or other public facilities?

4.14.4 Impact Analysis

The public services assessment for this PEA was conducted based upon a review of the websites for CAL FIRE (CAL FIRE, 2011), KCFD (KCFD, 2011), Kern County Sheriff's Office (KCSO, 2011), the Kern County Superintendent of School (KCSS, 2011), and a review of publicly available information related to public services for the Proposed Project area.

Would the project 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 public services: fire protection, police protection, schools, parks, or other public facilities?

Construction Impacts

Fire Protection

Less Than Significant Impact. As previously noted in this section, the Proposed Project would be located in an area that is designated as having a moderate to high fire potential (CAL FIRE, 2006). Construction of the Proposed Project would be temporary and would not be anticipated to require new or physically altered fire protection emergency services. The potential for interference with emergency service providers is further discussed in Section 4.8: Hazards and Hazardous Materials. The Proposed Project area would continue to be adequately supported by the existing fire protection services. Therefore, construction of the Proposed Project would be expected to result in less than significant impacts related to fire protection. As a result, the Proposed Project would not result in the need for new or physically altered governmental facilities for fire protection.

Police Protection

Less Than Significant Impact. Construction of the Proposed Project would not be expected to require police protection. Construction-related activities would occur during designated hours. The Proposed Project site, including the staging yard and equipment, would be enclosed within a secure gate and locked when crews are not at work. Construction crews would consist of up to 50 workers a day. During a normal work day, these workers would not require the services of police protection. SCE may also hire a local security company to provide security at the material staging yard during construction. Once the Proposed Substation site is graded, a temporary chain-link fence would be installed around the substation perimeter for added security. In addition, a majority of the construction-related activities would occur within designated construction areas, which would be located away from major emergency access routes, and as such construction activities would not be expected to significantly interfere with emergency police response. Therefore, construction of the Proposed Project would result in less than significant impacts related to police protection. As a result the Proposed Project would not result in the need for new or physically altered governmental facilities for police protection**.**

Schools

No Impact. As described in Section 4.13: Population and Housing of this PEA, the Proposed Project would not be expected to result in an increase in population within the area. Construction of the proposed substation and the other ancillary facilities would be temporary and would not require the relocation of workers to the Proposed Project area. There would not be an expected

increase in families or in school-age children as a result of the temporary construction activities. It is anticipated that the workers would commute from their respective homes and would return to their respective homes at the end of their shifts. The existing area would continue to be adequately served by the public schools described in this section. As a result the Proposed Project would not result in the need for new or physically altered schools.

Parks

No Impact. Construction of the Proposed Project would not be expected to result in a significant increase in the use or demand on park and recreational facilities in the area. The area is adequately serviced by the existing parks. Additionally, as discussed in further detail in Section 4.15: Recreation of this PEA, there would not be an expected significant increase in the number of patrons accessing the existing facilities as a result of the Proposed Project. Therefore, construction of the Proposed Project would not be expected to result in significant impacts related to parks. As a result, the Proposed Project would not result in the need for new or physically altered parks and there would be no impact**.**

Other Public Facilities

No Impact. Construction of the Proposed Project would not be expected to result in an increased demand for public services in the Proposed Project area. As previously noted, construction of the Proposed Project would not be expected to result in a shift or increase in population of the area. As such, construction of the Proposed Project would not result in an additional demand for or require an increase in the existing public services for the area, and the Proposed Project would not be expected to result in an impact related to other public facilities. As a result, the Proposed Project would not result in the need for other new or physically altered public facilities and there would be no impact**.**

Operation Impacts

Fire Protection

Less Than Significant Impact. The Proposed Project area would continue to be adequately supported by the existing fire protection services following development of the Proposed Project. Operation of the Proposed Project would not be expected to result an increase in population (see Section 4.13: Population and Housing of this PEA) and as such would not result in an increase in the demand on fire services (or other public services). However, the Proposed Project would be located in an area with a moderate to high fire hazard potential. SCE has standard protocols that are followed when the National Weather Service issues a red-flag warning. SCE participates in the Red Flag Fire Prevention Program with CAL FIRE, the California Office of Emergency Services, the U.S. Forest Service, and various city and county fire agencies. SCE complies with California Public Resources Code Sections 4292 and 4293 related to vegetation management in transmission line corridors. The proposed Banducci Substation would be an unstaffed, automated, low-profile substation. Operation would consist of annual inspections, routine maintenance and emergency repair of facilities and roads, which are unlikely to require the use

of public services. Operation of the Proposed Project would not significantly affect and fire protection response times or create higher demand for these public services. As a result the Proposed Project would not result in the need for new or physically altered governmental facilities for fire protection.

Police Protection

No Impact. The Proposed Project area would continue to be adequately supported by the existing police protection services following development of the Proposed Project. The operation of the proposed substation and poles would not require the presence of staff or employees in a manner that might lead to an increase in the population. The substation would be unattended and any maintenance staff would visit the site intermittently to perform various tasks. Security gates and lighting would be installed as part of the Proposed Project, and it is anticipated that the current police protection services would adequately serve the Proposed Project area during operation. As such, operation of the Proposed Project would not result in the need for new or physically altered governmental facilities for police protection.

Schools

No Impact. As previously noted, operation of the Proposed Project would not result in an increase in population and, as such, would not increase the number of school-aged children in the area. The Proposed Project would not result in an increase in population that would require additional school staff or alter the existing service ratios. Following development of the Proposed Project, school needs would continue to be adequately met by the existing school facilities. As such, operation of the Proposed Project would not result in the need for new or physically altered schools, and there would be no impact.

Parks

No Impact. Development of the Proposed Project would not result in the additional use or demand on park and recreational facilities in the area. The area is adequately serviced by the existing parks. There would not be an expected significant increase in the number of patrons accessing the existing facilities as a result of the Proposed Project, as discussed in further detail in Section 4.15: Recreation of this PEA. Therefore, operation of the Proposed Project would not result in the need for new or physically altered parks, and there would be no impact.

Other Public Facilities

No Impact. Operation of the Proposed Project would not be expected to result in impacts related to other public facilities. As noted above, operation of the Proposed Project would not be expected to alter service demands or the need for public services in the vicinity of the Proposed Project. The Proposed Project would not result in a substantial increase or the additional use of existing facilities consisting of, but not limited, medical, postal, and library facilities. As such, the Proposed Project would not result in the need for other new or physically altered public facilities, and there would be no impact.

4.14.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for public services.

4.14.6 Alternative

Site Alternative B

As with the Proposed Project, the potential impacts related to public services would be less than significant in relation to public services. The public services described for the Proposed Project would also be utilized for Site Alternative B and would likewise be expected to adequately support Site Alternative B.

4.14.7 References

California Department of Forestry and Fire Protection (CAL FIRE). (2006). *Fire and Resources Assessment Program.* Sacramento, CA.

California Department of Forestry and Fire Protection (CAL FIRE). (2011). *Red Flag Warnings and Fire Weather Watches.* Retrieved July 25, 2011, from: http://www.fire.ca.gov/communications/communications_firesafety_redflagwarning.php

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kern County Fire Department (KCFD). (2011). *Kern County Fire Department.* Retrieved July 27, 2011, from http://www.kerncountyfire.org

Kern County Sheriff's Office (KCSO). (2011). *Kern County Sheriff's Office.* Retrieved July 19, 2011, from http://www.kernsheriff.com/Pages/default.aspx

Kern County Superintendent of School (KCSS). (2011). *Tehachapi Unified.* Retrieved July 19, 2011, from http://kcsos.kern.org/Research/Data/Maps/Tehachapi_Unified

4.15 Recreation

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to recreation associated with the construction and operation of the proposed Banducci Substation and ancillary facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination whether the Proposed Project would result in significant environmental impacts related to recreation.

This analysis describes the existing and proposed conditions of the recreational resources in the Proposed Project Study Area, evaluates the recreational characteristics, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.15.1 Environmental Setting

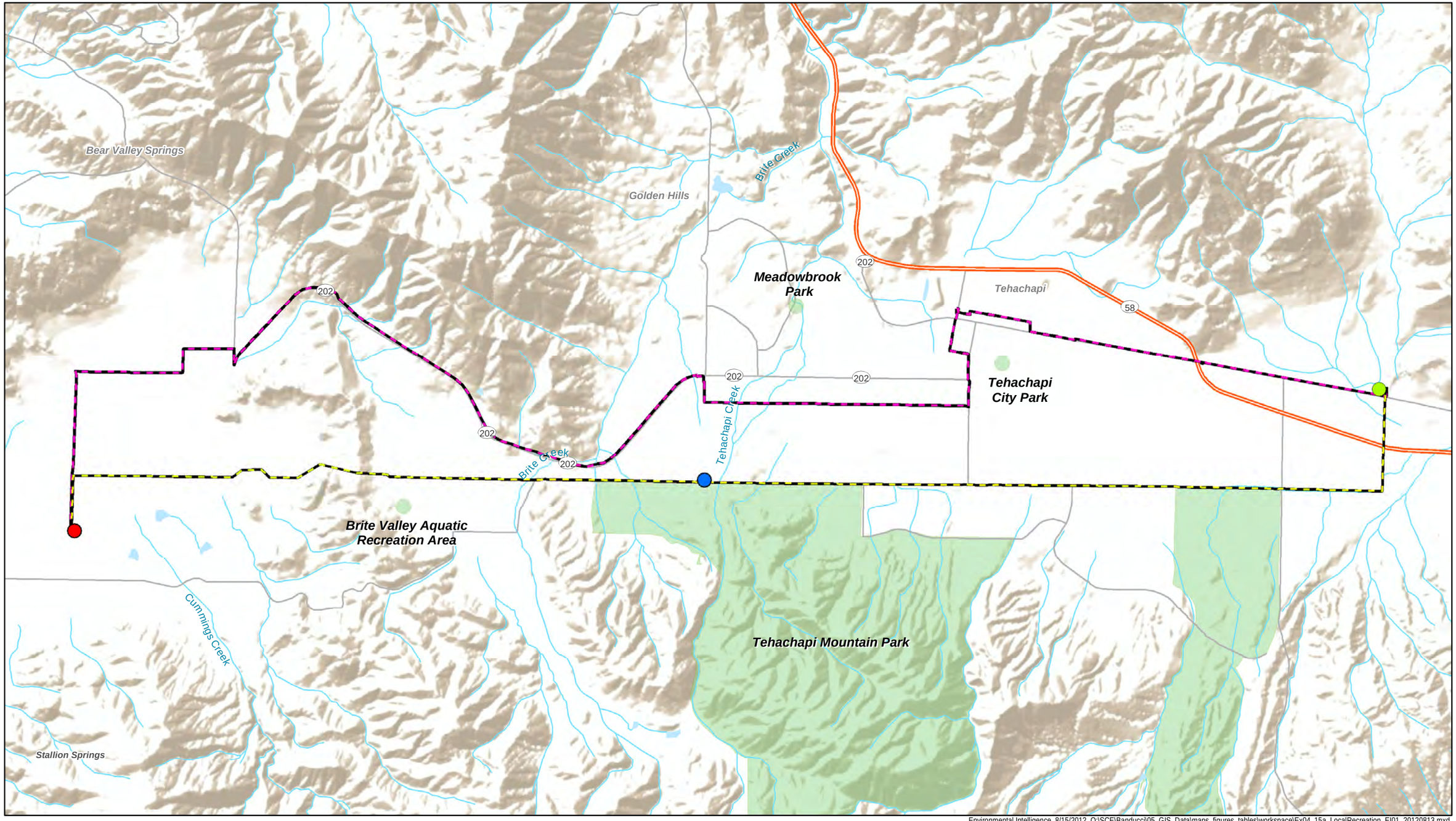
Public Parks, Open Spaces, and Recreational Areas

The Kern County Parks and Recreation Department manages and maintains eight regional parks, 40 neighborhood parks, and a number of public buildings, golf courses, and landscapes throughout the County that also are used for public recreational purposes (Kern County, 2011). There are no public parks (recreational facilities) located within 1 mile of the proposed Banducci Substation site. At least three public parks are located within 1 mile of the proposed telecommunication facilities. These recreational facilities include the Brite Valley Aquatic Recreation Area, Tehachapi City Park, Tehachapi Mountain Park, and Meadowbrook Park. In addition to these areas, there are a number of public parks, open spaces, and recreational areas that are located in the broader Proposed Project region, including, but not limited to, the Kern River State Park, Sequoia National Forest, Fort Tejon State Historical Park, and Red Rock Canyon Recreation Area. These open space areas are shown along with other prominent open space areas on Figure 4.15-1A: Recreation Resources in the Proposed Project Vicinity and Figure 4.15-1B: Parks and Open Spaces. The distances of the public parks, open spaces, and recreational areas from the nearest Proposed Project components are presented in Table 4.15-1: Public Parks, Open Spaces, and Recreational Areas.

Table 4.15-1: Public Parks, Open Spaces, and Recreational Areas

Public Park, Open Space, or Recreational Area Name	Approximate Distance from Proposed Banducci Substation Site	Approximate Distance From Nearest Telecommunications Facilities
Brite Valley Aquatic Recreation Area	3 miles northeast	200 feet south
Meadowbrook Park	7.3 miles northeast	1 mile north
Tehachapi City Park	9 miles northeast	0.25 mile south
Tehachapi Mountain Park	7 miles southeast	2.6 miles south
Sequoia National Forest	19 miles north	17 miles north
Fort Tejon State Historical Park	23 miles southwest	23 miles southwest
Kern River State Park	27 miles northwest	26 miles northwest
Angeles National Forest	47 miles southeast	45 miles north

The nearest public recreational facility to the Proposed Project components is the Brite Valley Aquatic Recreation Area. The Brite Valley Aquatic Recreation Area is located approximately 3 miles northeast of the proposed Banducci Substation location and 200 feet south of the nearest proposed telecommunications facilities.



Environmental Intelligence. 8/15/2012. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_15a_LocalRecreation_EI01_20120813.mxd.

Legend

- Proposed Banducci Substation
- Cummings Substation
- Monolith Substation
- Proposed Telecommunications Route 2
- Proposed Telecommunications Route 1
- Parks and Open Spaces
- Freeway / Major Highway
- Minor Highway / Major Road

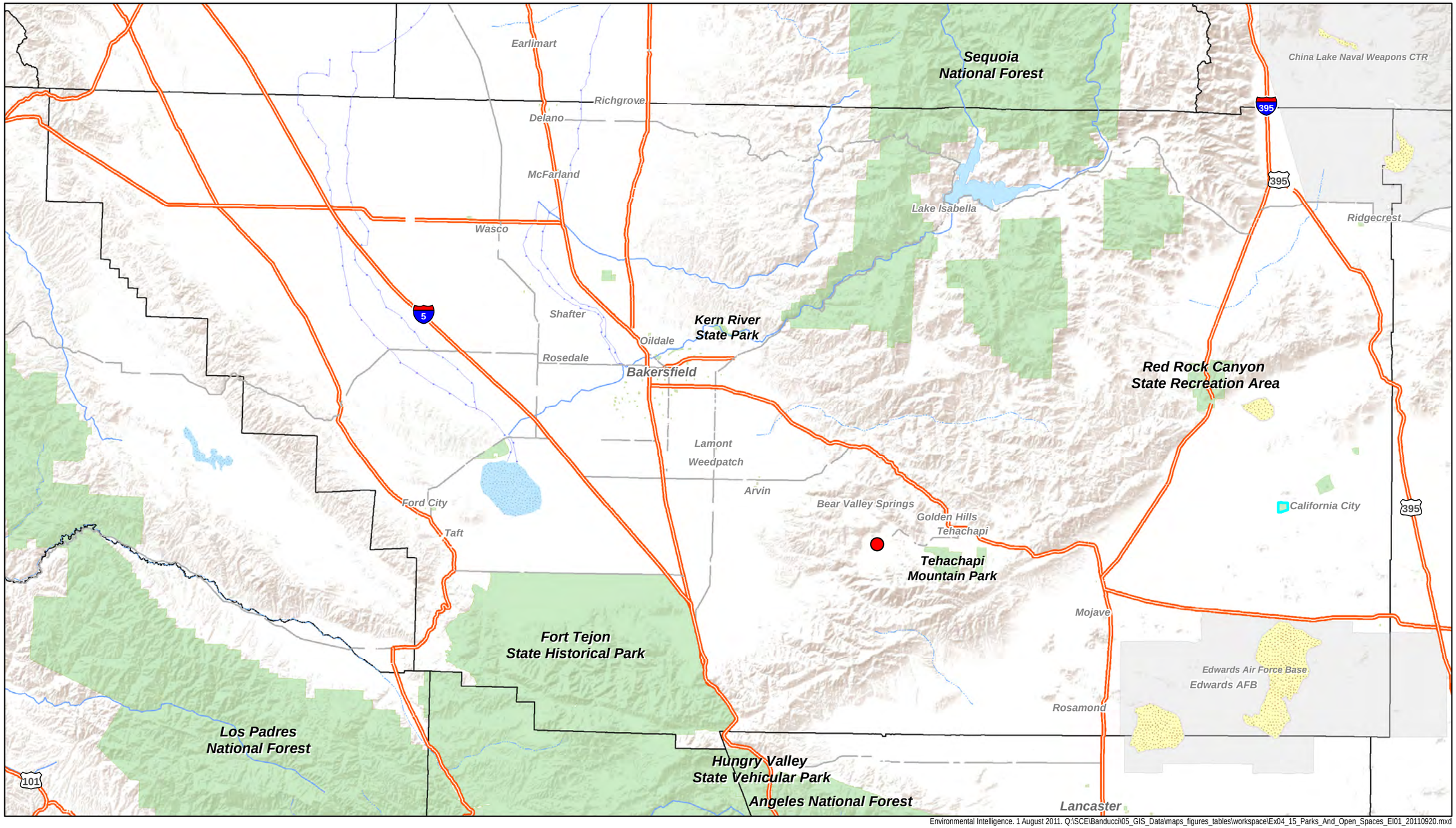
N W E S

0 0.5 1 2 Miles

Figure 4.15-1A: Recreation Resources in the Proposed Project Vicinity

Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company



Environmental Intelligence. 1 August 2011. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_15_Parks_And_Open_Spaces_EI01_20110920.mxd

Legend

- Proposed Banducci Substation
- Parks and Open Spaces
- Freeway / Major Highway
- Minor Highway / Major Road

N W E S

0 5 10 20 Miles

Figure 4.15-1B: Parks and Open Spaces
Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

4.15.2 Regulatory Setting

The regulatory framework discussed in this section identifies the federal, State, regional, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to recreation.

4.15.2.1 Federal

There are no federal recreational regulations, plans, or standards that are applicable to the Proposed Project.

4.15.2.2 State

There are no State regulations, plans, or standards that apply to the Proposed Project.

4.15.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County recognizes the importance of recreation and has developed goals to provide a variety of park and recreational programs that offer safe, equitable, and balanced recreation opportunities for all residents and visitors in the Kern County General Plan (Kern County, 2009).

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe the collection of unincorporated communities located in eastern Kern County along state route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Consistent with State and County requirements, the GTA Specific and Community Plan (GTASCP) includes a land use plan, as well as goals, policies and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

The GTASCP designates public and private recreational facilities and park areas. The purpose of this designation is to provide a wide variety of facilities to serve the many recreational interests of Kern County residents (Kern County, 2010). The permitted uses in these areas include, but are not limited to, hiking, camping, walking, picnicking, riding, and other recreational activities (Kern County, 2010). There are two parks and recreation management entities for the GTA: the Kern County Parks and Recreation Department and the Tehachapi Valley Recreation and Parks District (Kern County, 2010). Areas surrounding the proposed Banducci Substation are predominantly designated for agricultural use. Areas surrounding the proposed telecommunications facilities are largely designated as residential and agricultural, although other designations near these facilities include commercial and industrial.

4.15.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project-related impacts would be significant. Impacts from the Proposed Project would be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- 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?

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

4.15.4 Impact Analysis

Potential impacts related to recreation for this PEA were evaluated based upon site visits, a survey of satellite images, and Kern County geographic information systems (GIS) data. These resources were used alongside a review of the purpose and design of the Proposed Project to determine the recreational facilities nearest to the Proposed Project. The location and scope of the Proposed Project were then evaluated to determine if the Proposed Project would adversely affect recreational facilities in the vicinity of the Proposed Project.

Would the project 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?

Construction Impacts

No Impact. Construction of the Proposed Project would not involve the use of, or cause an increase in the use of, recreational facilities. The nearest public recreational facility to both the proposed Banducci Substation and proposed telecommunications facilities is the Brite Valley Aquatic Recreation Area. As mentioned above, the Brite Valley Aquatic Recreation Area is

located approximately 3 miles northeast and 200 feet south of the proposed Banducci Substation and nearest telecommunications facilities, respectively. It is anticipated that approximately 50 construction personnel would be working within smaller crews on the Proposed Project any given day during the anticipated 12-month construction period. During construction, some of the personnel may choose to use area recreational facilities during lunch breaks. However, the limited use of the facilities by personnel during construction would be temporary. The Brite Valley Aquatic Recreation Area is more than 90 acres and is designed for a capacity that far exceeds 50 individuals. Additionally, the limited and temporary nature of the anticipated use of the Brite Valley Aquatic Recreation Area or other recreational areas would not increase the need or demand on the existing recreational areas. The existing recreational facilities are sufficient to meet the needs of the existing area and the Proposed Project. Therefore, construction of the Proposed Project would not cause or accelerate the physical deterioration of any recreational facilities.

Operation Impacts

No Impact. Operation of the Proposed Project would not require permanent staff. Maintenance activities would occur throughout the life of the Proposed Project; however, the size of the maintenance staff or crew would not exceed that of the construction crew during periodic and routine maintenance activities. As discussed in the construction impacts, use of the existing recreational facilities by personnel associated with the Proposed Project would be limited and temporary. The Proposed Project area would be adequately served by the existing recreational facilities during operation of the Proposed Project. Therefore, operation of the Proposed Project would not cause or accelerate the physical deterioration of any recreational facilities.

Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Construction Impacts

No Impact. Construction of the Proposed Project would not include recreational facilities and would not require the construction or expansion of recreational facilities. The purpose of the Proposed Project is to serve population growth in SCE's Electrical Needs Area to meet projected load requirements, as described in Chapter 1.0, Purpose and Need of this document. Construction of the Proposed Project would not include components that would be expected to create or alter any existing or recreational facilities in the area.

Operation Impacts

No Impact. As noted above, the Proposed Project would not include recreational facilities and would not require the construction or expansion of recreational facilities. The proposed Banducci Substation would be unstaffed and maintenance staff would access the site periodically. As with construction of the Proposed Project, operation of the Proposed Project would not include components would be expected to create or alter any existing or recreational facilities in the area.

4.15.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for recreation.

4.15.6 Alternative

Site Alternative B

Site Alternative B would be located in the same setting as the Proposed Project. Site Alternative B would have components that are similar to the Proposed Project, and the construction and operation of this alternative would be the same as that for the Proposed Project. The public parks, open spaces, and recreational areas that were described in this section for the Proposed Project would also provide services for Site Alternative B. Like the Proposed Project, Site Alternative B and the surrounding area would be adequately served by the existing recreational areas. Also like the Proposed Project, Site Alternative B would not include components that would be expected to create or alter any existing or recreational facilities in the area. Like the Proposed Project, Site Alternative B would not be expected to result in impacts related to recreation.

4.15.7 References

Kern County. (2011). *Parks and Recreation.* Retrieved September 2, 2011, from http://www.co.kern.ca.us/parks/who-we-are.asp

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

4.16 Transportation and Traffic

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to transportation and traffic associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of transportation and traffic in the Proposed Project Study Area, evaluates the transportation and traffic conditions, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.16.1 Environmental Setting

The regional transportation system in the vicinity of the Proposed Project is largely composed of state highways and local roads within Kern County. The proposed Banducci Substation would be located at the intersection of Pelliser Road and Dale Road. Access to Pelliser Road is provided by Banducci Road to the south and Cummings Valley Road to the north. Regional access to the Proposed Project Study Area is provided by California State Route (SR) 202, which heads west from California State Route 58.

State Route 202 is a two-lane highway that travels in an east-west direction northeast and east of the proposed Banducci Substation site. The telecommunications infrastructure, specifically proposed Telecommunications Route 2, runs along SR 202 just north of Administration Drive (which becomes Giraudo Road when it is west of Bailey Road) near the Substation Study Area; it then follows SR 202 east to Woodford-Tehachapi Road into the City of Tehachapi.

State Route 58 is a two and four-lane highway that travels in an east-west direction north, northeast, and east of the Proposed Project. The proposed Banducci Substation site is located more than ten miles south and roughly eight miles southeast of SR 58. The telecommunications infrastructure is less than one mile south of SR 58 and crosses the proposed telecommunications routes at Jameson Boulevard.

The Proposed Project's telecommunication routes would include two crossings of roadways, SR 202 and SR 58, that are within the jurisdiction of the California Department of Transportation (Caltrans) and three crossings of railroads that are within the jurisdiction of Union Pacific Railroad (UPRR). There are also at least three easements that Southern California Edison (SCE) would be required to obtain in support of the telecommunications infrastructure.

Level of Service

Level of service (LOS) is a qualitative performance measure used to rank roadways and traffic conditions. LOS values range from A through F with "A" representing "free flow" conditions to "F" representing "stop-and-go gridlock" traffic conditions (Kern COG, 2010). Table 4.16-1: Level of Service Descriptions provides a description of the LOS designations and descriptions that are applied in Kern County.

Table 4.16-1: Level of Service Descriptions

LOS Designation	Description
Level of Service "A"	Free flow: no approach phase is fully used by traffic and no vehicle waits longer than one red indication. Insignificant delays. Volume/Capacity ratio less than or equal to 0.60.
Level of Service "B"	Stable operation: an occasional approach phase is fully used. Many drivers begin to feel somewhat restricted within platoons of vehicles. Minimal delays. Volume/capacity ratio from 0.61 to 0.70.
Level of Service "C"	Stable operation: major approach phase may become fully used and most drivers feel somewhat restricted. Acceptable delays. Volume/Capacity ratio from 0.71 to 0.80.
Level of Service "D"	Approaching unstable: drivers may have to wait through more than one red signal cycle. Queues develop but dissipate without excessive delays. Volume/Capacity ratio from 0.81 to 0.90.
Level of Service "E"	Unstable operation: volumes at or near capacity. Vehicles may wait through several signal cycles and long queues form upstream from intersection. Significant delays. Volume/Capacity ratio from 0.91 to 1.00.
Level of Service "F"	Forced flow: represents jammed conditions. Intersection operates below capacity with several delays that may block upstream intersections. Volume/Capacity ratio greater than 1.00.

SOURCE: Kern COG, 2010; Kern County, 2009: and Caltrans, 2001

Due to the lack of traffic (with the exception of the crossing of agricultural equipment) typically found in these areas, LOS is not a significant measure for rural, agricultural or sparsely populated locations such as the proposed Banducci Substation site. However, the proposed telecommunication routes pass through areas with additional traffic. A review of the Kern County Council of Governments Regional Transportation Plan shows that roadways in the Proposed Project Study Area are either unrated or rated at a Level C or better (Kern COG, 2010).

Average daily traffic (ADT) counts provide an overview of the utility of the roads within the vicinity of Proposed Project. Table 4.16-2, Average Daily Traffic and LOS for Streets Near the Substation Study Area, provides the most recent ADT data for streets within the vicinity of the Substation Study Area (Figure 4.16-1: Average Daily Traffic Locations).

Source: Kern COG, Regional Transportation Monitoring Improvement Program, 2011(http://206.227.45.77/kerncog/)

CUMMINGS VALLEY RD
GIRAUDO RD
BANDUCCI RD
BAILEY RD
PELLISER RD
SCHATZ RD
BEAR VALLEY RD
202 HWY
LOG HOME WY
JACKS CT
ROOST AV
ROWE AV
ROBERTS AV
HAVEN LN
JENNA ST
TROTTER DR
Cummings Valley Elementary School
CA Correctional Institution
SKYLINE DR
HORIZON CT
YEARLING PL
KELSO DR
ASSAULT DR
CASTLE GATE DR
HARNESS DR
CAYLEY DR
SPRINKLE AV
SPINKLE CT
HIDDEN OAKS DR
SECRETARIAT RD
PEGASUS ST
EDWARD ST
BAUMBACH AV
CHANAC RD
HIGHLINE RD
ROBBY RD
DALE RD
TRACK VIEW DR
SASIA RD
PINEHURST PL
GLENEAGLE CT
ST ANDREWS DR
STALLION SPRINGS DR
SANTA ANITA ST
SULKY LN
HIALEAH DR
MAN O WAR DR
BOWIE ST
AUGUSTA WY
BOLD VENTURE DR
ACK ACK CT
CAVAN CT
CHURCHILL ST
BUCKPASSER DR
RONNIE AV
SARIDA AV
OLD RANCH RD
202

Environmental Intelligence. 7 February 2012. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_16-1_ADTLocations_EI01_20120207.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Road
- Average Daily Traffic (ADT) Location Points

N W E S

0 0.25 0.5 1 Miles

Figure 4.16 - 1: Average Daily Traffic Locations

Proposed Banducci Substation Project

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Table 4.16-2: Average Daily Traffic and LOS for Streets near the Substation Study Area

Location	ADT *(Vehicle Trips)*	Count Year	V/C *(Volume /Capacity Ratio)*	Existing LOS	Construction ADT *(Proposed Banducci Substation +50 ADT / Proposed Project +100 ADT)*	Construction V/C	Forecasted LOS
Banducci Road west of Pelliser Road	3,400	2007	0.272	A *Free flow traffic; insignificant delays*	3,450 / 3,500	0.276 / 0.28	A *Free flow traffic; insignificant delays*
Banducci Road east of Pelliser Road	3,400	2007	0. 272	A *Free flow traffic; insignificant delays*	3,450 / 3,500	0.276 / 0.28	A *Free flow traffic; insignificant delays*
Banducci Road east of Schatz Road	3,450	2007	0.276	A *Free flow traffic; insignificant delays*	3,500 / 3,550	0.28 / 0.284	A *Free flow traffic; insignificant delays*
Pelliser Road south of Giraudo Street	1,700	2007	0.136	A *Free flow traffic; insignificant delays*	1,750 / 1,800	0.14 / 0.144	A *Free flow traffic; insignificant delays*
Giraudo Road west of Pelliser Road	469	2011	0.038	A *Free flow traffic; insignificant delays*	519 / 569	0.042 / 0.046	A *Free flow traffic; insignificant delays*
Cummings Valley Road without SR 202	6,992	2010	0.559	A *Free flow traffic; insignificant delays*	7,042 / 7,092	0.563 / 0.567	A *Free flow traffic; insignificant delays*

NOTES:

1. The anticipated LOS estimates are based upon the volume to capacity (V/C) ratio calculation where the volume is roughly equivalent to the ADT and the total daily capacity for each road segment is 12,500 (which would be equivalent to the highest potential roadway capacity of a two-lane highway with an LOS E). For the purposes of this analysis, the average control delay for all of these segments is anticipated to be less than 10 seconds/vehicle (which is the most conservative delay time). The forecasted LOS estimates are based upon on the conservation assumption of the anticipated additional vehicles that would be added to the Substation Study Area as a result of the Proposed Project.
2. See the Kern COG, Regional Transportation Monitoring Improvement Program, 2011 (http://206.227.45.77/kerncog/) and Kern County Traffic Counts (http://www.co.kern.ca.us/roads/pdf/Traffic_Counts.pdf). Also see the NCHRP, 1999, Transportation Research Board, 1994 and Caltrans, 2001.

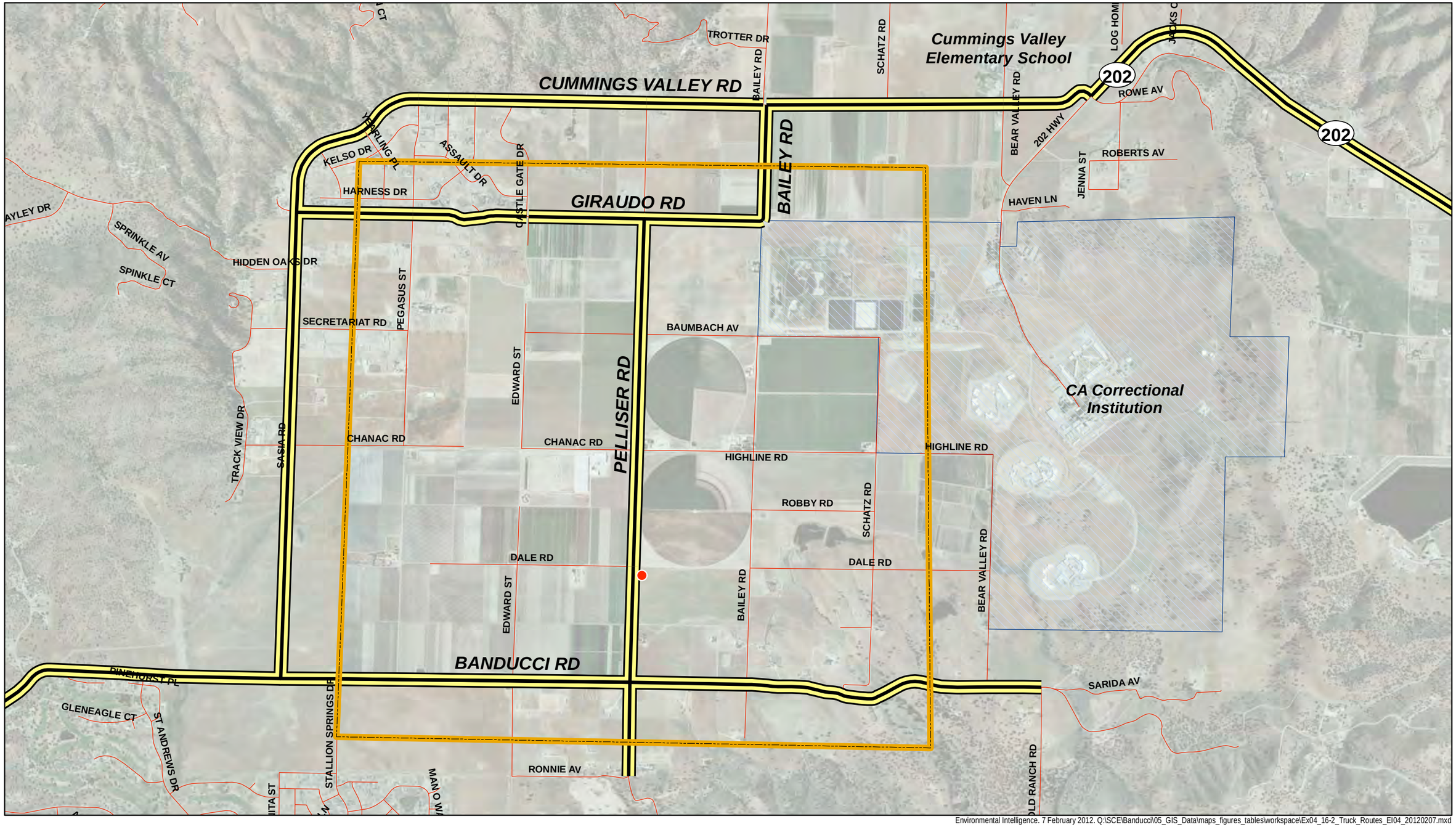
ADT throughout the proposed telecommunication routes varies from an ADT of approximately 1,000 to an ADT of more than 4,000 vehicle trips.

Truck Routes

According to the Kern County General Plan, at least 26 percent of all vehicle circulation in Kern County is completed by trucks (Kern County, 2009). The Kern Council of Government has identified United States Highway 395, SR 14, and SR 58 as key truck corridors in Kern County (Kern COG, 2010). SR 58 traverses the northeast portion of the proposed telecommunications infrastructure in two locations. The Kern Council of Government has not designated truck routes within the Substation Study Area, however there are several major access roads that could accommodate trucks and could be used during construction to provide truck access to the proposed Banducci Substation site (as well as to the proposed telecommunication routes). For the purposes of this section, these access roads are referred to as "truck routes". These truck routes include SR 58, Highline Road, and West Valley Boulevard for access to the telecommunications facilities. The northern and eastern segments of the SR 202, Cummings Valley Road, Pelliser Road (which runs west of the proposed Banducci Substation location), and Banducci Road, which runs to the south of the proposed Banducci Substation site; could be used as truck routes to access the proposed Banducci Substation site during construction. These truck routes are highlighted on Figure 4.16-2: Truck Routes.

Emergency Access

Kern County has identified emergency access concerns related to the areas surrounding the proposed Banducci Substation site in the Circulation Element of the Kern County General Plan (Kern County, 2009). Pelliser Road is the major emergency access road both to and from the proposed Banducci Substation site. The truck routes described above would provide general access and serve as emergency access routes to the proposed Banducci Substation site and the proposed telecommunication routes. Temporary access roads would also be established as needed to access portions of the proposed Banducci Substation site which are not located on main thoroughfares.



Environmental Intelligence. 7 February 2012. Q:\SCE\Banducci\05_GIS_Data\maps_figures_tables\workspace\Ex04_16-2_Truck_Routes_EI04_20120207.mxd

Legend

- Proposed Banducci Substation
- Substation Study Area
- CA Correctional Institution
- Truck Route
- Secondary Road

N W E S

0 0.25 0.5 1 Miles

FIGURE 4.16 - 2: TRUCK ROUTES
PROPOSED BANDUCCI SUBSTATION PROJECT

SOUTHERN CALIFORNIA EDISON
An EDISON INTERNATIONAL Company

Bikeways

There are no existing bikeways located within the vicinity of the proposed Banducci Substation site. According to the Kern County Bicycle Facilities Plan, the nearest proposed bikeways are located closer to the proposed telecommunications routes and approximately 8 miles northeast of the proposed Banducci Substation site in the City of Tehachapi (Kern COG, 2001).

Bus Routes

The Kern Regional Transit serves the areas of Bakersfield, Keene, Tehachapi, Mojave, Rosamond, and Lancaster (Kern COG, 2010). Although there are no portions of the regional transit that directly access the Substation Study Area, the East Kern Express provides services for the area along SR 58 located within the vicinity of both the proposed Banducci substation and the proposed telecommunication routes.

Railroads

A portion of the UPRR crosses through the middle and downtown areas of the City of Tehachapi. Proposed Telecommunications Route 2 crosses the UPRR at three locations which are approximately 8.75 miles, 9.41 miles, and 12.70 miles northeast of the proposed Banducci Substation site.

Airports

There is a private landing airstrip at Psk Ranch, approximately 0.75 mile northeast of the proposed Banducci Substation site. Observations and site reconnaissance from recent visits to the Proposed Banducci Substation Study Area indicate that this airstrip appears to not currently be used for aircraft take-off and landing operations, and the site has been largely overtaken and populated by vegetation (Figures 4.1-2, A-10 and A-11). The Tehachapi Municipal Airport is located more than 9 miles northeast of the proposed Banducci Substation site and just north (roughly 300 feet) of the nearest section of the proposed Telecommunications Route 2 across the UPRR and SR 58 crossings. The Proposed Project would be located approximately 5 miles north of Black Mountain Supersonic Corridor which is a military Supersonic Corridor Edwards Air Force base is located more 40 miles southeast of the proposed Banducci Substation site and is approximately 30 miles southeast of the nearest proposed telecommunication routes. The Proposed Project would not be located within an area that would be subject to military review (Kern County, 2010).

4.16.2 Regulatory Setting

The regulatory framework discussed in this section identifies the federal, State, regional, and local statutes, ordinances, or policies reviewed during the preparation of this analysis and that will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to transportation and traffic.

4.16.2.1 Federal

Hazardous Materials Transportation Act of 1974

The Hazardous Materials Transportation Act of 1974 directs the United States Department of Transportation (USDOT) to establish criteria and regulations regarding safe storage and transportation of hazardous materials. The USDOT would primarily deal with the transportation of hazardous materials on roadways in the Proposed Project area. Section 4.8, Hazards and Hazardous Materials, of this PEA addresses the transportation of hazardous materials, types of materials defined as hazardous, and the treatment of hazardous materials for the Proposed Project.

4.16.2.2 State

California Streets and Highways Code

This Code requires project proponents to obtain permits from Caltrans for any roadway encroachment during truck transportation and delivery. The Code includes regulations for the care and protection of highways (both State and County) and requires permits for any load that exceeds Caltrans weight, length, or width standards for public roadways.

Sections 700 through 711 provide provisions that are specific to utility providers. The Code also outlines directions for cooperation with local agencies, guidelines for permits, as well as general provisions relating to state highways and the Caltrans' jurisdiction.

California Joint Utility Traffic Control Manual

The California Joint Utility Traffic Control Manual (CJUTCM) provides guidelines for ensuring that the needs of all road users (motorists, bicyclists, and pedestrians within the highway including persons with disabilities) are met through a temporary traffic control (TTC) zone during highway construction, utility work, maintenance operations and the management of traffic incidents.

The CJUTCM provides factors that must be considered in order to provide safety for motorists, bicyclists, pedestrians, workers, enforcement/emergency officials, and equipment at the job site. These factors include:

1. Safety principles that govern the design of permanent roadways and roadsides and that should also govern the design of temporary traffic control zones. The goal should be to route road users through such zones using roadway geometrics, roadway features and temporary traffic controls as nearly as possible comparable to those for normal highway/traffic situations.

2. A temporary traffic control (TTC) plan that should be prepared and understood by all responsible parties before the site is occupied. Any changes in the TTC plan

must be approved by the Engineer of the public agency or authority having jurisdiction over the highway.

In addition, the CJUTCM provides instructions and illustrations of end-of-work and night operations protocol, sign recommendations, channeling devises, barricades, arrow panels, and flagger procedures.

4.16.2.3 Local

The California Public Utilities Commission (CPUC) General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan and Congestion Management Plan

LOS "D" has been established as the minimum system wide LOS traffic standard in the Kern County General Plan's Circulation Element and Congestion Management Plan. The Kern County General Plan and Congestion Management Plan provide the following relevant goals:

Goals

- Goal 2. Upgrade road circulation in and around Tehachapi (Circulation Element).
- All roadway segments in the Congestion Management Plan network shall maintain a level of service "E" or better (Congestion Management Plan).
- Any roadway segments in the Congestion Management network that are operating at a level of service worse than "E" on the adoption of the first Congestion Management Program shall not be further degraded (Congestion Management Plan).
- Require emergency plans to include procedures for traffic control and security of damaged areas (Congestion Management Plan).

Kern Council of Governments Regional Transportation Plan

As a regional transportation agency, the Kern COG prepares the Regional Transportation Plan (RTP) to examine long-range transportation issues, opportunities and needs for Kern County (Kern COG, 2010).

The RTP establishes a set of regional transportation goals, policies, and actions intended to guide the development of the planned multimodal transportation systems including vehicular traffic, rail, water, and air transit within Kern County. There are seven underlying goals of the RTP:

1. Mobility — Improve the mobility of people and freight
2. Accessibility — Improve accessibility to major employment and other regional activity centers
3. Reliability — Improve the reliability and safety of the transportation system
4. Efficiency — Maximize the efficiency of the existing and future transportation system
5. Livability — Promote livable communities
6. Sustainability — Minimize effects on the environment
7. Equity — Ensure an equitable distribution of the benefits among various demographic and user groups

The Kern COG is required to periodically update the RTP and in doing so will ensure that the transportation system addresses the transportation and traffic plans for Kern County in a manner that is consistent with the applicable federal and State requirements.

Greater Tehachapi Area Specific and Community Plan

The Greater Tehachapi Area (GTA) is a term used to describe a collection of unincorporated communities located in eastern Kern County along SR 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan, goals, policies, and implementation measures designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

The Proposed Project would be located within an area that is classified by the GTASCP as a Tehachapi Regional Transportation Impact Fee Area. Development within a Transportation Impact Fee Area is subject to a transportation impact fees if the project would result in substantial transportation related impacts. Maintaining a LOS of C or better on roadways within the designated Transportation Impact Fee Areas remains one of the goals of the GTASCP.

The GTASCP also provides the following right-of-way allowances for relevant streets near the proposed Banducci Substation location.

- **Banducci Road** - Collector / Secondary Road - Minimum 90 - foot right-of-way (typically provides two to four lanes)

- **Pelliser Road** - Local Street - Minimum 60-foot right-of -way (typically provides two lanes)

- **Highline Road** - Collector / Secondary Road - Minimum 90 - foot right-of-way (typically provides two to four lanes)

- **Dale Road** - Collector / Secondary Road - Minimum 90 - foot right-of-way (typically provides two to four lanes)

4.16.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project related impacts would be significant. Impacts from the Proposed Project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- 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?

- 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 and highways?

- 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?

- Substantially increase hazards due to a design feature (*e.g.*, sharp curves or dangerous intersections) or incompatible uses (*e.g.*, farm equipment)?

- Result in inadequate emergency access?

- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

4.16.4 Impact Analysis

Would the project 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?

Construction Impacts

Less Than Significant Impact. Construction-related traffic activities for the Proposed Project would be expected to include the traffic resulting from the use of heavy equipment, deliveries and construction workers. Traffic related to construction would be temporary (*i.e.*, a short number of hours over the course 12 months) and would be consistent with the established Kern County, CJUTCM, and Caltrans Guidelines for construction related traffic measures. Occasionally, during deliveries of large equipment or materials, temporary traffic controls would be used. Generally, materials associated with construction efforts would be delivered by truck to the established marshalling yard(s). However, wood poles and other materials may be delivered directly to the job site. Delivery activities requiring major street use would be scheduled to occur during off-peak traffic hours whenever possible in order to avoid impacts to the effectiveness or performance of the circulation system. Some deliveries, such as concrete, would occur during peak hours when footing work is being performed. SCE would employ commonly used traffic control measures consistent with those published in the CJUTCM by the California Joint Utility Traffic Control Committee, including advanced warning signs, channelizing devices, flagging, and arrow panels to further avoid potential construction related impacts (CJUTCC, 2010).

During construction of the Proposed Project, it would be anticipated that up to 50 workers could be at the various components of the Proposed Project on any given day. Although it is anticipated that a number of the workers would carpool, in the event that each worker traveled to the site alone, a worst case scenario would include the addition of 50 vehicles to traffic within the vicinity of the Proposed Project. As noted in Chapter 3.0, Project Description, of this PEA, the estimated deployment and number of crew members would vary depending on factors such as material availability, resource availability, and construction scheduling.

During construction of the proposed Banducci Substation and telecommunication facilities, it would be estimated that crews of between two and 20 workers could be at work within the Substation Study Area. A worst case scenario would include the addition of 20 vehicles to traffic in the vicinity of where the proposed Banducci Substation and transmission components would occur. Throughout the day, a majority of these vehicles would be stationary and parked at the proposed Banducci Substation site and would not be considered a substantial addition to traffic in the area. During installation of the proposed fiber optic telecommunications cables it would be that crews of approximately three to six workers could be at the work site. A worst case scenario would include the addition of six vehicles to traffic in the vicinity of where the

telecommunications work is taking place, which would be considered a negligible addition to traffic.

It is anticipated that any additional trips to the proposed Banducci Substation would be centralized near the proposed Banducci Substation location. The proposed Banducci Substation site would serve as the base for all construction-related activities and the staging area(s) for equipment. An increase in 50 trips per day would only represent an approximately ten percent increase at the road segment with the lowest ADT (Giraudo Road west of Pelliser Road) and a less than one percent increase at the road with the highest ADT (Cummings Valley Road without SR 202).[1] The LOS at each of these roadways is currently LOS C or better and the increased use noted above would not be expected to impact the current service levels within the vicinity of the Substation Study Area or of the larger Proposed Project Study Area (Table 4.16-2: Average Daily Traffic and LOS for Streets Near the Substation Study Area). Traffic-related delays resulting from the slow movement or travel of large construction equipment may be considered a nuisance to some travelers; however this is a common occurrence with agricultural equipment frequently traversing the roadways in the area. The use of this equipment would largely occur in a concentrated area on the proposed Banducci Substation site and would be short-term and limited in scope. In addition, installation of the proposed overhead fiber optic telecommunications cables would require use of a bucket truck, whereas proposed underground telecommunications cables installed in new underground conduit and structures that would require the use of a backhoe. For the installation of the fiber optic telecommunication cables, SCE would comply with the applicable plans, ordinances, and policies discussed in this section. SCE would also establish a TTC zone and would employ commonly used traffic control measures that are consistent with those published in the CJUTCM by the California Joint Utility Traffic Control Committee to ensure that all road users are provided with safe passage through the TTC zone (CJUTCC, 2010).

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would not be expected to contribute to any additional traffic in the area because the proposed Banducci Substation would be unstaffed. Maintenance of the Proposed Project and the proposed telecommunication routes would be completed by a small number of workers that would not be expected to reach or exceed 50 workers under routine conditions. The routine maintenance activities would contribute only a negligible amount to traffic in the area. During operation, SCE would comply with the applicable plans, ordinances, and policies discussed in this section. In addition, as noted above, the LOS within the vicinity of the Proposed Project is at a level that is LOS C or better, and operation of the Proposed Project would not alter that situation. Therefore, operational impacts related to an applicable plan, ordinance or policy establishing the effectiveness and performance of the circulation system would be less than significant.

[1] The assumption of up to 50 trips per day assumes that up to 20 workers would travel to and from the Substation Study Area in separate vehicles daily. This estimate further assumes that up to 10 additional daily trips (i.e. for lunch, supplies, etc.) would be associated with the Proposed Project during construction. For the entire Proposed Project, the worst case scenario would be an additional 50 workers and 100 average daily trips.

Would the project 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 and highways?

Construction Impacts

Less Than Significant Impact. Although it would be anticipated that construction of the Proposed Project would be expected to result in the addition of cars and equipment, as discussed in the previous response, this increase would not be substantial. Traffic related to the Proposed Project would not be expected to impact the current LOS. Specifically, project related construction traffic would not exceed LOS C or the capacity of the existing roadways. Construction activities would be designed to minimize work on or use of local streets (*e.g.*, Pelliser Road) to the extent possible. Any construction or installation work requiring the crossing of a local street, highway (*i.e.*, Caltrans), or rail line (*i.e.*, UPRR) would incorporate the use of guard poles, netting, or similar means to limit any interference with the transportation and to protect moving traffic and structures from the activity. In addition, as noted above, construction of the Proposed Project would be consistent with the established traffic related guidelines and policies. SCE would employ commonly used traffic control measures that are consistent with those published in the 2010 CJUTCM by the California Joint Utility Traffic Control Committee to ensure the Proposed Project does not conflict with an applicable congestion management program.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would not generate enough traffic to impact the LOS in the vicinity. The proposed Banducci Substation would be unstaffed, and maintenance-related activities would not be substantial enough to alter the existing LOS (as discussed in the previous response). As such, operational impacts related to an applicable congestion management program would be less than significant.

Would the project 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?

Construction Impacts

No Impact. The proposed Banducci Substation would not be located near a functional airport or landing strip. There is a private landing airstrip at Psk Ranch, approximately 0.75 mile northeast of the proposed Banducci Substation site. Observations and site reconnaissance from recent visits to the Proposed Banducci Substation Study Area indicate that this airstrip appears to not currently be used for aircraft take-off and landing operations, and the site has been largely overtaken and populated by vegetation (Figure 4.1-2, A-10 and A-11). The Tehachapi Municipal Airport is located more than 9 miles northeast of the proposed Banducci Substation site and has runways located approximately 300 feet north of the proposed Telecommunications Route 2. While the proposed telecommunications cables would be installed near the Tehachapi Municipal

Airport, installation of the fiber optic telecommunications cables would not result in an increase in traffic levels or a change in the location of air traffic patterns. A military Supersonic Corridor (Black Mountain Supersonic Corridor) is located approximately 5 miles south of the proposed Banducci Substation. Finally, Edwards Air Force base is located more than 40 miles southeast of the proposed Banducci Substation site and is approximately 30 miles southeast of the nearest proposed telecommunication routes.

Construction of the Proposed Project would not entail components that have the potential to interfere with or impact the operation of air traffic patterns. As such, construction of the Proposed Project would not be expected to result in impacts related to a change in air traffic patterns that would result in substantial safety risks.

Operation Impacts

No Impact. As with construction, operation of the Proposed Project would not result in an increase in air traffic or include design features that would impact air traffic patterns. The Proposed Project would further not entail components that interfere with or impact the operation of air traffic patterns. As such, operation of the Proposed Project would not be expected to result in impacts related to a change in air traffic patterns that would result in substantial safety risks.

Would the project substantially increase hazards due to a design feature (*e.g.*, sharp curves or dangerous intersections) or incompatible uses (*e.g.*, farm equipment)?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would not include design features or incompatible uses that would increase transportation and traffic related hazards. Construction of the Proposed Project may require the development of access roads for trucks, large vehicles, and other equipment to access the site; however, these access roads would reduce potential hazardous conditions by ensuring the availability of safe access points to and from the various components of the Proposed Project. Additionally, SCE would incorporate traffic control measures that are designed to ensure the safety of all road users and to further ensure that hazards along roadways or at intersections are not substantially increased during construction. SCE would acquire the necessary permits to ensure that the access roads and temporary easements meet the requirements of the relevant agencies.

Operation Impacts

Less Than Significant Impact. As noted above, the Proposed Project does not include design features or other uses which would create traffic or transportation related hazards. The Proposed Project elements would continue to be compatible with the existing conditions. The design specifications for the roads within the proposed Banducci Substation site would meet SCE's design requirements and specifications. The telecommunication cables would largely be on existing distribution routes and not result in any changes to the roadways. As noted above, the Proposed Project would comply with the existing design requirements, and potential impacts

related substantially increasing hazards due to a design feature or incompatible uses would be less than significant.

Would the project result in inadequate emergency access?

Construction Impacts

Less Than Significant Impact. Construction related activities would not be expected to impede access of the emergency vehicles to the Proposed Project site. There are existing roads surrounding the Proposed Project site that would be used to access the site in the event of an emergency. Construction vehicles and equipment would operate in a concentrated area on the proposed Banducci Substation site and would be short-term and limited in scope. Work along the proposed telecommunication routes would not interfere with the emergency access in the area. Impacts related to impeding access of emergency vehicles would be less than significant.

Operation Impacts

NoImpact. Operation of the Proposed Project would not alter access to the proposed Banducci Substation site or other areas (including the proposed telecommunication routes) in the vicinity of the Proposed Project. There would be no impact to existing access routes or emergency access roads as a result of operation of the proposed Project.

Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Construction Impacts

Less Than Significant Impact. Construction of the proposed Banducci Substation would not be located along a bike or alternate transportation route. Installation of the proposed telecommunications cables may temporarily impede the use of roadways for public transit, bicycles, or pedestrians along roadways where construction is taking place. However, as previously noted, a TTC zone would be put in place and bicyclists and pedestrians would be provided with access and safe passage through the TTC zone in accordance with the CJUTCM. The TTC plan will implement traffic control measures that will accommodate all motorists, including buses, and allow safe passage through the TTC zone (CJUTCC, 2010). As previously noted in this section, construction of the proposed Banducci Substation would not impact performance of the roadways surrounding the vicinity of the proposed Banducci Substation. Therefore, construction of the Proposed Project would not be expected to conflict with the adopted policies, plans, and programs regarding public transportation.

Operation Impacts

No Impact. As with construction of the Proposed Project, operation of the proposed Banducci Substation would not be located along a bike or alternate transportation route. Operation of the proposed telecommunication facilities would not affect roadways or the use of roadways for public transit, bicycles, or pedestrians. Operation of the Proposed Project would not impact performance of the roadways surrounding the vicinity of Proposed Project. Therefore, operation of the Proposed Project would not be expected to conflict with the adopted policies, plans, and programs regarding public transportation.

4.16.5 Applicant Proposed Measures

No APMs are proposed for transportation and traffic.

4.16.6 Alternative

Site Alternative B

Site Alternative B would be similar to the Proposed Project in location and components. The discussion of impacts that were provided above for the Proposed Project would apply to Site Alternative B.

4.16.7 References

California Department of Transportation (Caltrans). (2001). *Guide for the Preparation of Traffic Impact Studies*. Sacramento, CA.

California Department of Transportation (Caltrans). (2011). Website. Retrieved on September 15, 2011, from http://www.dot.ca.gov/

California Joint Utility Traffic Control Committee (CJUTCC). (2010). *California Joint Utility Traffic Control Manual.* Sacramento, CA.

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf

Kern County Council of Governments (Kern COG). (2010). *2011 Final Regional Transportation Plan.* Bakersfield, CA.

Kern County Council of Governments (Kern COG). (2011). *Regional Transportation Monitoring Improvement Program.* Retrieved from http://206.227.45.77/kerncog/

Kern County Council of Governments (Kern COG). (2001). *Kern County Bicycle Facilities Plan.* Bakersfield, CA.

National Cooperative Highway Research Program (NCHRP), Transportation Research Board, National Research Council. (1999). *Capacity and Quality of Service of Two-Lane Highways.* Berkeley, CA.

Transportation Research Board. (1994). *Highway Capacity Manual, Special Report 209* Washington, DC.

4.17 Utilities and Service Systems

This section of the Proponent's Environmental Assessment (PEA) provides an analysis of the potential impacts to utilities and service systems associated with the construction and operation of the proposed Banducci Substation and associated facilities (Proposed Project) and its alternatives. In accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15064 (a through h), this PEA section provides substantial evidence that is used to support the determination of whether the Proposed Project would result in significant environmental impacts.

This analysis describes the existing and proposed conditions of the utilities and service systems in the Proposed Project Study Area, evaluates the utilities and service systems characteristics, and assesses the impacts that have the potential to occur as a result of the Proposed Project.

4.17.1 Environmental Setting

The Proposed Project would be located within the jurisdictions of the Central Valley and Lahontan Regional Water Quality Control Boards (RWQCBs). Utility providers for the Proposed Project Study Area are discussed in further detail below.

Water

The Proposed Project would be located within the Tehachapi–Cummings County Water District. The district manages two primary sources of water for the Greater Tehachapi Area (GTA). These sources include groundwater basins, including three basins within this District, as well as the State Water Project contract allocation. As previously noted in Section 4.6, Hydrology and Water Quality of this PEA, the Proposed Project area has approximately 701 acre-feet of unexercised water rights available from the existing groundwater basins. The area also has a contract for roughly 19,300 acre-feet per year of imported water from the State Water Program (Kern County, 2010). The allocation of this water is made available through the Kern County Water Agency and the State Department of Water Resources and would in turn be distributed to the Proposed Project area and the surrounding area through the California Water Service Corporation-Antelope Valley District (formerly the Grand Oaks Water Company). As part of the Tehachapi-Cummings County Water District, the Proposed Project area requires approximately 3,000 to 8,000 acre-feet of water per year (Kern County, 2010). Water infrastructure within the Proposed Project area is provided by the California Water Service Corporation-Antelope Valley District (Kern County, 2010).

Sewage/Wastewater Treatment

Approximately 90 percent of the existing lots within the Proposed Project Study Area are on septic systems (Kern County, 2010). Sewer service is not currently available at the proposed Banducci Substation site. A stand-alone, permanent restroom would be installed within the

substation perimeter wall, which would be equipped with self-contained water and waste holding tanks. The restroom would be maintained by an outside service company.

The wastewater treatment facilities that are located within the vicinity of the Proposed Project Study Area are operated by: the Golden Hills Sanitation Company, the Bear Valley Community Services District, and the Stallion Springs Community Service District (Kern County, 2010).

Electricity

Electric service within the Proposed Project Study Area is provided by SCE. The Substation Study Area is within an Electrical Needs Area, described in Chapter 1.0, Purpose and Need of this PEA as being located within the Antelope-Bailey 66 kV System. This Electrical Needs Area is bounded by Woodford-Tehachapi Road to the east, El Camino Drive to the north, the Pacific Gas & Electric service territory to the west, and High Gun Drive to the south.

Landfills and Transfer Stations

The Kern County Waste Management Department operates seven landfills throughout the County. There are three active landfills located within the vicinity of the Proposed Project. The three landfills are described in detail in Table 4.17-1: Landfills and Transfer Stations within the Proposed Project Vicinity. There are also three transfer (and recycling) stations located within the vicinity of the Proposed Project that would hold and process waste for transport to a landfill. These three stations are: Bear Valley Community Services District (CSD) Transfer Station; Stallion Springs Transfer Station; and Tehachapi Recycling, Inc. These stations are also described in Table 4.17-1.

4.17.2 Regulatory Setting

The regulatory framework that is discussed below in this section identifies the federal, State, and local statutes, ordinances, or policies that have been reviewed during the preparation of this analysis and will be considered during the decision-making process in order to determine the potential for the Proposed Project to result in significant impacts related to utilities and service systems.

4.17.2.1 Federal

Clean Water Act Section 402: National Pollutant Discharge Elimination System

Section 402 of the Clean Water Act (CWA) establishes the National Pollutant Discharge Elimination System (NPDES) permit program to regulate point source discharges of pollutants into Waters of the United States (EPA, 2011). Discharges or construction activities that disturb 1 or more acres, including the proposed project, are regulated under the NPDES storm water program and are required to obtain coverage under a NPDES Construction General Permit (EPA, 2011). The Construction General Permit establishes limits and other requirements such as the implementation of a Storm Water Pollution Prevention Plan (SWPPP) which would further

specify best management practices (BMPs) as well as other measures designed to avoid or eliminate pollution discharge in the nation's waters (EPA, 2011).

Table 4.17-1: Landfills and Transfer Stations within the Proposed Project Vicinity

Name	Location	Waste Type	Permitted Capacity	Estimated Capacity Used[1]	Remaining Capacity	Anticipated Closure Date	Approximate Distance from Proposed Banducci Substation Site
Landfills							
Tehachapi Sanitary Landfill	12001 Tehachapi Boulevard, Tehachapi, CA 93561	Construction/ demolition, green waste, solid waste	3,388,723 cubic yards	2,513,849 cubic yards	874,874 (25.8%)	January 2014	12.2 miles northeast
Bena Landfill	11400 Boron Ave, Boron CA 93516	Construction/ demolition, green waste, mixed municipal	N/A	N/A	N/A	N/A	19 miles northeast
Mojave-Rosamond Sanitary Landfill	400 Silver Queen Road Mojave CA, 93501	Construction/ demolition, green waste, solid waste	330,000 cubic yards	N/A[1]	N/A[1]	December 2014	27.6 miles southeast
Stations							
Bear Valley CSD Transfer Station	28999 Lower Valley Road, Tehachapi, CA 93561	Construction / demolition, mixed municipal	3,850 tons/year	N/A	N/A	N/A	4.7 miles northwest
Stallion Springs Transfer Station	28500 Stallion Springs Drive, Tehachapi, CA 93561	Mixed municipal, construction / demolition	7, 340 cubic yards	N/A	N/A	N/A	2.4 miles southwest
Tehachapi Recycling, Inc.	416 North Dennison Road, Tehachapi, CA 93561	Construction / demolition, green materials, industrial, inert, mixed municipal	N/A	N/A	N/A	N/A	10 miles northeast

NOTES: 1. CalRecycle indicates that the estimated remaining is capacity for this facility is greater than 100 percent of the total permitted capacity.
SOURCE: CalRecycle, California Waste Stream Profiles and Solid Waste Information System, Facility / Site Listing, 2011

For the Proposed Project, NPDES regulations are administered by the Region 5, Central Valley RWQCB and Region 6, Lahontan RWQCB. The Proposed Project's SWPPP compliance measures are described in Chapter 3.0, Project Description, of this PEA.

National Pollutant Discharge Elimination System Permit

As noted in Section 4.9, *Hydrology and Water Quality*, and as noted above, the NPDES was established per Section 402 of the CWA, in order to control discharges of pollutants from point sources. The CWA includes a section devoted to storm water permitting (Section 402), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES permit program. The State Water Resources Control Board (SWRCB) issues both general permits and individual permits under this program. The SWRCB for California delegates much of its NPDES authority and administration to nine regional water quality control boards. The Proposed Project's NPDES permits are under the jurisdiction of the Region 5, Central Valley RWQCB and Region 6, Lahontan RWQCB. Specifically, SCE would obtain NPDES coverage under the Statewide Construction General Permit (Order No. 2009-009-DWQ as amended by 2010-0014-DWQ) from the Central Valley RWQCB (Construction General Permit).

4.17.2.2 State

General Order No. 131-D

The California Public Utilities Commission (CPUC) is the regulatory agency for General Order 131-D. This General Order provides guidelines and measures for public utility providers to plan and construct substations, electric generation, and transmission, power, and distribution line facilities in California. This General Order identifies the process, documentation, and measures required to ensure compliance. The Proposed Project would be subject to comply with this order.

Integrated Waste Management Act of 1989

The Integrated Waste Management Act of 1989 created the authority and responsibilities of the California Integrated Waste Management Board (CIWMB). The Act, which is administered by the CIWMB, requires all local and county governments to adopt a waste reduction measure designed to manage and reduce the amount of solid waste sent to landfills. This Act established reduction goals of 25 percent by the year 1995 and 50 percent by the year 2000. The CIWMB has continued to encourage reduction measures through the continued implementation of reduction measures, legislation, infrastructure and supporting local requirements for new developments to include areas for waste disposal and recycling on-site.

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) regulates hazardous waste, cleans up existing contamination, and identifies ways to reduce the hazardous waste produced in California. The DTSC operates programs that respond to incidents and prevent releases;

performs research such as evaluations; and enforces the appropriate handling, transport, storage, treatment, disposal, and cleanup of hazardous wastes.

California Code of Regulations (Title 27)

Title 27 (Environmental Protection) of the California Code of Regulations defines regulations for the treatment, storage, processing, and disposal of solid waste. The State Water Resources Control Board maintains and regulates compliance of Title 27 (Environmental Protection) of the California Code of Regulations. The compliance of the Proposed Project would be enforced by the Central Valley and Lahontan RWQCB.

4.17.2.3 Local

The CPUC General Order No. 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." As a public utility project that is subject to the jurisdiction of the CPUC, the Proposed Project is exempt from local regulation and discretionary permits. As such, the regional and local regulatory standards are provided in this analysis for informational purposes only.

Kern County General Plan

Kern County recognizes the importance of environmental and public health and has developed goals and policies to protect the public from health and safety hazards in the Kern County General Plan (Kern County, 2009). The County encourages the development and upgrading of transmission lines and associated facilities (e.g., substations) as needed to serve County residents and access the county's generating resources, insofar as transmission lines do not create significant hazards. The Kern County General Plan offers goals and policies that encourage the safe and orderly development of transmission lines to access Kern County's electrical resources along routes, which minimize potential adverse environmental effects. Also the County encourages that projects provide availability of public utility service as per approved guidelines of the serving utility. The County reviews proposed transmission lines and their alignments for conformity with the Land Use, Conservation, and Open Space Element of this General Plan and holds preference for upgrade of existing lines and use of existing corridors where feasible.

Greater Tehachapi Area Specific and Community Plan

GTA is a term used to describe a collection of unincorporated communities located in eastern Kern County along State Route (SR) 58 between the San Joaquin Valley and the Mojave Desert. The GTA generally encompasses the rural communities of Alpine Forest, Bear Valley Springs, Brite Valley, Cummings Ranch, Cummings Valley, Golden Hills, Mendiburu Springs, Monolith, Old Towne, and Stallion Springs. Kern County has adopted a GTA Specific and Community Plan (GTASCP) that sets forth a land use plan, goals, policies, and implementation measures

designed to ensure that future development in the GTA is consistent with the goals and policies of Kern County's General Plan while recognizing the uniqueness of the region. The proposed Banducci Substation component of the Proposed Project would be located within the GTASCP.

4.17.3 Significance Criteria

Appendix G of the CEQA Guidelines provides the criteria used in determining whether project related impacts would be significant. Impacts from the proposed project could be considered significant if they have the potential to create substantial impacts when the following questions are considered. Would the Proposed Project:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the expansion of which could cause significant environmental effects?

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

- Result in the determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

- Comply with federal, State, and local statutes and regulations related to solid waste?

4.17.4 Impact Analysis

Impacts associated with utilities and service systems for the Proposed Project were evaluated based upon information from the Environmental Protection Agency (EPA; 2011), CalRecycle (CalRecycle, 2011), and Central Valley and Lahontan RWQCBs, and the Solid Waste Information System (SWIS, 2011), as well as related sources.

Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would be expected to comply with the wastewater treatment requirements of the Central Valley and Lahontan RWQCBs. During construction, restroom wastewater would be managed and treated by a private company. Wastewater associated with other construction-related activities and runoff leaving the proposed substation site would be limited due to the size and nature of the Proposed Project. The proposed Banducci Substation site is approximately 6 acres and would be located in an agricultural area with soils that are capable of absorbing a majority, if not all, of the water used during construction. Additionally, construction of the Proposed Project would not be expected to use significant amounts of water. However, it is anticipated that construction-related activities, including the use of water for dust suppression, the installation of landscaping and associated irrigation, and washing equipment, may contribute to the amount of wastewater that could potentially leave the site. The anticipated impact from these activities would be minimal wastewater generated by construction related activities. The wastewater would be retained at the proposed Banducci Substation site. Furthermore, SWPPP, BMPs, and NPDES requirements would be incorporated to ensure that the Proposed Project would not exceed the wastewater treatment requirements of the Central Valley and Lahontan RWQCBs. Therefore, the Proposed Project would be expected to result in less than significant impacts related to wastewater treatment requirements.

Operation Impacts

Less Than Significant Impact. During operation, the use of the restroom at the proposed Banducci Substation site would be limited to periodic uses by maintenance personnel or other staff. The resulting wastewater would be managed by a private company. Operation of the Proposed Project would not entail activities that would be expected to generate a substantial amount of wastewater that would exceed the requirements of the Central Valley and Lahontan RWQCBs. Operation-related activities would include water for landscaping and maintenance activities including the use of water to clean equipment at the proposed substation site. However, these activities would be infrequent and would not be expected to create a substantial amount of wastewater and would not be part of a wastewater system. Additionally, BMPs and appropriate requirements would be incorporated to ensure that the Proposed Project would not exceed the wastewater treatment requirements of the Central Valley and Lahontan RWQCBs. As such,

operation of the Proposed Project would be expected to result in less than significant impacts related to wastewater treatment requirements.

Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Construction Impacts

No Impact. Use of water during construction would be limited to that used for dust suppression and comparable activities as noted above and would be at low volumes and flow rates. Wastewater generated by restroom facilities at the site would be managed by a private company. The Proposed Project would not result in an increase in the existing population and would not create or increase the demand on the existing wastewater systems in the area. It is anticipated that the amount of wastewater that could potentially be discharged as part of the Proposed Project would be minimal and the majority of the wastewater (i.e., used for dust suppression) would be retained at the proposed Banducci Substation location through the implementation of the SWPPP, BMPs, and NPDES requirements. As such, the Proposed Project would not require the use, modification, or construction of existing or new wastewater treatment facilities. Therefore, construction of the Proposed Project would not be expected to result in impacts related to requiring or resulting in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

Operation Impacts

No Impact. Use of water during operation of the Proposed Project would be minimal. It is anticipated that water would be used for landscaping and infrequent maintenance activities that might require equipment to be cleaned at the site. However, it is anticipated that the wastewater discharge generating from these sources would be minimal and would be at low volumes and flow rates. A stand-alone, permanent restroom would be installed at the proposed Banducci Substation site, which would be equipped with a holding tank. The holding tank would be maintained by a private service company. As with construction, the wastewater generated by these uses would be largely retained at the proposed substation location through the implementation of the BMPs and NPDES requirements. Therefore, operation of the Proposed Project would not be expected to result in impacts related to requiring and resulting in the construction of new water or wastewater treatment facilities or expansion of existing facilities.

Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the expansion of which could cause significant environmental effects?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would include grading and removal of existing vegetation from the proposed Banducci Substation site. These site

preparation measures would have the potential to reduce water infiltration into the soil as the existing site is currently covered in vegetation which typically facilitates infiltration and reduces the erosion potential. As previously noted, the existing site for the proposed Banducci Substation is not currently connected to a storm water drainage facility. During storm events, storm water discharges would be contained within the proposed Banducci Substation site and controlled (through the implementation of the site design, SWPPP, BMPs and NPDES requirements) for the Proposed Project. The anticipated disturbance that would be temporarily or permanently attributed proposed telecommunications routes would be less than 5 acres and would be addressed under the SWPPP, BMPs and NPDES requirements. As such, construction of the Proposed Project would not require or result in the construction of new storm water drainage facilities or expansion of which would cause significant environmental effects.

Operation Impacts

Less Than Significant Impact. It is anticipated that the Proposed Project would alter the existing drainage patterns at the proposed Banducci Substation site. The existing site is covered with vegetation. Completion of the proposed Banducci Substation would add an impermeable surface area to the proposed Banducci Substation location. The Proposed Project would be expected to permanently disturb approximately 6.4 acres and temporarily disturb approximately 34.7 acres. At the proposed Banducci Substation site, approximately 6.3 acres would be permanently disturbed and would be covered with semi-permeable and impermeable surfaces during the operations phase. This amount is greater than the existing impermeable surfaces at the proposed substation site. Despite the potential increase in coverage, storm water or other runoff would be contained within the proposed Banducci Substation site through the site design and BMP measures which would include the use of permeable material such as crushed gravel to allow some water to penetrate the ground. Additionally, after construction of the proposed Banducci Substation and the associated perimeter wall, flows would be diverted around the enclosed substation back towards the natural drainage pattern. During storm events, additional water discharges outside of the construction boundaries would be controlled through landscaping and the implementation of BMPs. This would ensure that the Proposed Project would meet or improve the existing storm water drainage at the site and would not impact the infiltration rates in the area to the extent that would require the expansion of existing storm water facilities. The anticipated disturbance that would be permanently attributed to the proposed telecommunications routes would be less than 1 acre and would not be considered substantial. Additionally, storm water control measures would be described in the conditions of the grading permit from Kern County prior to construction of the Proposed Project. Therefore, operation of the Proposed Project would result in less than significant impacts related to the construction of new storm water drainage facilities or expansion of which would cause significant environmental effects.

Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Construction Impacts

No Impact. Construction of the Proposed Project would not require the use of water supplies. SCE would utilize water trucks and other dust control measures would be used for dust suppression. The water will be supplied through existing entitlements and resources located in/or surrounding the Proposed Project Study Area. The restroom facility would be stand-alone and would not require use of the existing water supplies. Finally, potable water during construction would be provided by SCE through bottled water. These uses would not require the expansion of water supply entitlements. Therefore, construction of the Proposed Project would not be expected to result in water supply impacts.

Operation Impacts

No Impact. Landscape irrigation would be the primary need for water during operation and maintenance of the Proposed Project. As during construction, water trucks and other dust control measures would be used during the operation and maintenance of the Proposed Project. Restroom facilities would be stand-alone and would not require use of the existing water supplies and potable water would be supplied through bottled water. As such, operation of the Proposed Project would not be expected to result in water supply impacts.

Would the project result in the determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction Impacts

No Impact. The existing site for the proposed substation is not currently on a septic system. Construction of the Proposed Project would not be expected to generate substantial or new levels of wastewater in a manner that would have the potential to result in significant impacts. Wastewater generated by restroom use at the proposed Banducci Substation would be managed by a private company. The Proposed Project would not result in an increase in the existing population and would neither create nor increase the demand on the existing wastewater systems in the area. The existing wastewater treatment facilities would not be accessed, and the current demand on these facilities would neither increase as a result of the construction of the Proposed Project nor impact the capacity of these facilities. It is further anticipated that the amount of wastewater that could potentially be discharged as part of construction of the Proposed Project would be minimal. The majority of the wastewater would be largely retained at the proposed Banducci Substation site through the substation design and incorporation of the SWPPP, BMPs, and NPDES requirements. Therefore, construction of the Proposed Project would not be expected to result in impacts to the adequacy of wastewater treatment capacity to serve the Proposed Project's projected demand in addition to the provider's existing commitments.

Operation Impacts

No Impact. As with construction, operation of the Proposed Project would not generate substantial or new levels of wastewater in a manner that would have the potential to result in significant impacts. Wastewater generated by restroom use at the site would be managed by a private company. The Proposed Project would not result in an increase in the existing population, and thus would neither create nor increase the demand on the existing wastewater systems in the area. The existing wastewater treatment facilities would not be accessed, and the current demand on these facilities would not increase as a result of the construction of the Proposed Project. Operation of the Proposed Project would not impact the capacity of these facilities. It is further anticipated that the amount of wastewater that could potentially be discharged as part of the operation of the Proposed Project would be minimal. The majority of the wastewater would be largely retained at the proposed Banducci Substation location through the substation design and incorporation of BMPs. Further, the proposed Banducci Substation site would be unstaffed and maintenance activities would be infrequent such that they are not expected to contribute to the existing demand. Therefore, operation of the Proposed Project would not be expected to result in impacts to the adequacy of wastewater treatment capacity to serve the project's projected demand in addition to the provider's existing commitments.

Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Construction Impacts

Less Than Significant Impact. Construction-related activities, including the removal and replacement of approximately 40 existing wood poles for the Proposed Project, would be expected to generate waste that would be reused or sent to the local landfills. Waste materials that are not recyclable would be categorized by SCE in order to assure appropriate final disposal. Non-hazardous waste would be transported to local waste management facilities, and, if any hazardous waste is identified for disposal (e.g., potentially the removed wood poles), it would be disposed of in a Class I hazardous waste landfill or in the lined-portion of an RWQCB-certified municipal landfill, as appropriate. Hazardous liquid materials, such as mineral oil, would be subject to the Spill Prevention and Control Countermeasures Plan (SPCC) developed for the Proposed Project. It is anticipated that the waste generated by the construction of the Proposed Project would be reused or accommodated within the existing Kern County landfills within the vicinity of the Proposed Project. Although it is anticipated that the two landfills located closest to the Proposed Project (the Tehachapi Sanitary Landfill and Bena Landfill, located roughly 12.15 miles northeast and 19 miles northeast of the proposed Banducci Substation, respectively) would be closed in 2014, the waste generated during construction, could be reused or disposed of in the remaining four Kern County operated landfills, located more than 50 miles away from the proposed Banducci Substation site and would have the sufficient permitted capacity to accommodate waste from the Proposed Project. Therefore, construction of the Proposed Project would be expected to result in less than significant impacts related to being adequately served by a landfill.

Operation Impacts

No Impact. Because the proposed Banducci Substation would be unstaffed, it is anticipated that an insignificant amount of solid waste would be generated during operation. It is anticipated that the Proposed Project would be adequately served by the existing active landfills located within Kern County. As such, operation of the Proposed Project would not be expected to result in significant impacts related to being adequately served by a landfill.

Would the project comply with federal, State, and local statutes and regulations related to solid waste?

Construction Impacts

Less Than Significant Impact. Construction of the Proposed Project would be expected to comply with the federal, State, and local statutes and regulations related to solid waste. As previously noted, construction of the Proposed Project would include the replacement of approximately 40 existing treated wood poles. SCE would be required to reuse or dispose of these poles as part of the Proposed Project. It is anticipated that these poles would either be reused, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of a RWQCB-certified municipal landfill. Waste materials that are not recyclable would be categorized by SCE in order to assure appropriate final disposal. Non-hazardous waste would be transported to local waste management facilities, and, if any hazardous waste is identified for disposal (e.g., potentially the removed wood poles), it would be disposed of in a Class I hazardous waste landfill or in the lined-portion of an RWQCB-certified municipal landfill, as appropriate. Hazardous liquid materials, such as mineral oil, would be subject to the SPCC developed for the Proposed Project. Other solid waste generated during construction of the Proposed Project would be temporarily stored in a designated area of the laydown yard, would be covered and maintained as necessary to deter nuisance animals such as small rodents or common ravens, and would be reused or disposed of in a manner that is consistent with the applicable federal, State, and local statutes and regulations related to solid waste. As such, construction of the Proposed Project would be expected to result in less than significant impacts related to the compliance of federal, State, and local statutes and regulations related to solid waste.

Operation Impacts

Less Than Significant Impact. Operation of the Proposed Project would be expected to comply with the federal, State, and local statutes and regulations related to solid waste. Operation of the Proposed Project would have a limited potential to generate solid waste. Infrequent maintenance activities at the proposed Banducci Substation site would result in a minimal amount of solid waste at the site. Solid waste would be temporarily stored and maintained in a designated area at the proposed Banducci Substation site. The waste would then be disposed of in a manner that would comply with the federal, State, and local statutes and regulations related to solid waste. As such, the operation of Proposed Project would be expected to result in less than significant impacts related the compliance of federal, State, and local statutes and regulations related to solid waste.

4.17.5 Applicant Proposed Measures

No Applicant Proposed Measures are proposed for utilities and service systems.

4.17.6 Alternative

Site Alternative B

Development of Site Alternative B would result in impacts that are similar to those identified for the Proposed Project. The project design, construction, operation, and maintenance elements would be similar to those identified for the Proposed Project. Like the Proposed Project, construction and operation of Alternative B would result in limited wastewater from activities such as dust suppression or landscaping as well as limited solid waste. Unlike the Proposed Project, there is an existing septic system at the Site Alternative B location which would need to be considered during the site design and would need to be removed during site preparation and grading. As with the Proposed Project, a restroom facility would be constructed that would be managed by a company to be contracted by SCE. As with the Proposed Project, SCE would not require the implementation of APMs and the potential impacts associated with Site Alternative B would be managed through the incorporation of SWPPP, BMPs, and NPDES requirements to levels that are less than significant. Therefore, impacts related to utilities and service systems for the alternative are expected to result in impacts that are comparable to the Proposed Project.

4.17.7 References

California Department of Toxic Substances Control. (2011). *DTSC: Who We Are and What We Do.* Retrieved September 6, 2011, from http://www.dtsc.ca.gov/InformationResources/DTSC_Overview.cfm

CalRecycle. (2011). *California Waste Stream Profiles: Facilities*. Sacramento, CA. Retrieved September 6, 2011, http://www.calrecycle.ca.gov/profiles/Facility/Landfill/

CalRecycle. (2011). *Solid Waste Information System (SWIS), Facility/Site Listing.* Sacramento, CA. Retrieved August 12, 2011, from http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx

Environmental Protection Agency (EPA). (2011). *National Pollution Discharge Elimination System (NPDES).* Retrieved September 7, 2011, from http://water.epa.gov/type/oceb/habitat/cwa402.cfm

Kern County. (2010). *Greater Tehachapi Area Specific and Community Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved July 7, 2011, from http://www.co.kern.ca.us/planning/pdfs/SPs/gtasp_final.pdf

Kern County. (2009). *Kern County General Plan*. Bakersfield, CA: Kern County Planning and Community Development Department. Retrieved June 28, 2011, from http://www.co.kern.ca.us/planning/pdfs/kcgp/KCGP.pdf