

CHAPTER 10.0 CULTURAL, HISTORIC, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES

This chapter describes the existing conditions pertaining to cultural, historic, archaeological, and paleontological resources, and discusses applicable federal, state, and regional regulations. This chapter also evaluates the potential environmental consequences that could result from each alternative discussed in Chapter 2 related to cultural, historic, archaeological, and paleontological resources, as well as human remains.

Cultural resources are categorized into two subtopics: archaeological and historic resources. Archaeological resources are divided into two more categories: prehistoric and historic. Prehistoric archaeological resources date from before the onset of the Spanish Colonial period (1769 through 1848), and consist of tangible or observable evidence of past human activity found in direct association with a geographic location, including properties possessing intangible, traditional cultural values. Historic resources are commonly referred to as the “built environment” and date from after the onset of the Spanish Colonial period. Historic resources can include buildings, structures, or objects that are at least 50 years of age and historically significant.

Paleontological resources are any fossilized remains, traces, or imprints of organisms, preserved in or on the Earth’s crust, that provide information about the history of life on Earth, with the exception of materials associated with an archaeological resource (as defined in Section 3(1) of the Archaeological Resource Protection Act of 1979 (16 U.S.C. 470bb(1)), or any cultural item as defined in Section 2 of the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001)) (County of Tulare 2012).

Public and agency comments received during early public scoping (CPUC 2009) included concerns regarding impacts to local tribes (burials, bedrock mortars, ceremonial gathering areas, and petroglyphy and pictographs at village sites), and potential impacts to Native American sites.

In this analysis the geographic scope for direct environmental effects consists of the Area of Direct Impacts (ADI), described in the *Cultural Resources Management Plan for the Southern California Edison San Joaquin Cross Valley Loop Project* (Pacific Legacy Inc. 2012). This includes the areas where Covered Activities could result in physical alterations to a cultural or paleontological resource.

The geographic scope for indirect environmental effects consists of the Area of Potential Impacts (API) identified in the *Cultural Resources Management Plan for the Southern California Edison San Joaquin Cross Valley Loop Project* (Pacific Legacy Inc. 2012). This area consists of the right-of-way (ROW) and all ancillary areas where Covered Activities

could result in alterations to the context or importance of a cultural or paleontological resource, including the following:

- A continuous corridor surrounding the proposed alignment, including a 150-foot-wide buffer extending to either side of the centerline of reconstructed transmission lines and 100-foot-wide buffer extending to either side of the centerline of new transmission lines
- Ancillary use areas and facilities outside this 150-foot-wide or 100-foot-wide corridor including laydown yards (Ivanhoe and Road 156), temporary pulling/tensioning sites, and temporary structure work areas, as well as a 100-foot-wide buffer extending beyond these use areas and facilities
- Existing access roads, road improvement areas, and proposed access roads, as well as a 50-foot-wide buffer extending to either side of the centerline of any access road or other linear facility
- Ground disturbance areas required for work in the vicinity of the Rector Substation as well as a 100-foot-wide buffer surrounding those locations.

Information in this section summarizes the *Cultural Resources Management Plan for the Southern California Edison San Joaquin Cross Valley Loop Project* (Pacific Legacy Inc. 2012) and the *Paleontological Resource Training and Mitigation Plan: San Joaquin Cross Valley Loop Transmission Project* (Paleo Solutions Inc. 2012). Other sources consulted are listed in the references cited portion of this chapter.

10.1 AFFECTED ENVIRONMENT

This section describes the existing condition of cultural, historic, archaeological, and paleontological resources that might be affected by the proposed action. The following discussion related to the archaeological, historical, and paleontological setting uses information from the *Tulare County General Plan 2030 Update Recirculated Draft Environmental Impact Report* (County of Tulare 2010a), *Tulare County General Plan 2030 Update: 2010 Background Report* (County of Tulare 2010b), *Cultural Resources Management Plan for the Southern California Edison San Joaquin Cross Valley Loop Project* (Pacific Legacy Inc. 2012), and the *Paleontological Resource Training and Mitigation Plan: San Joaquin Cross Valley Loop Transmission Project* (Paleo Solutions Inc. 2012).

10.1.1 Archaeological Background

Prehistoric Setting

To summarize the prehistoric setting of the southern central portions of the San Joaquin Valley, researchers have divided the prehistoric occupation into four periods: Paleoindian, Early, Middle, and Late. In general, the archaeology and prehistory of the southern central portions of the San

Joaquin Valley are not well understood. Much of the archaeological material from the San Joaquin Valley area has not been found in context, but has either been obtained from private collections or recovered during salvage operations conducted during archaeological site work. Early and widespread agricultural use of the valley floor has destroyed much of the bottomland archaeology, and siltation has likely buried many resources below tens of feet of sediment.

Paleoindian Period (12,000–9,000 BC)

Evidence of the Paleoindian Period is limited to surface finds of fluted projectile points. One of the most significant Paleoindian sites in this region is located on the southwest shore of Tulare Lake, where fluted projectile points, scrapers, crescents, and Lake Mojave series points have been discovered.

Early Period (9,000 –6,000 BC)

Subsistence of habitation during the Early Period in the southern San Joaquin Valley is believed to have been based largely on the hunting of large game and fishing. Evidence of the early period has the following general attributes:

- Grinding implements (milling stones and handstones)
- Hand-molded baked clay net weights
- Olivella and Haliotis shell beads and ornaments
- Stemmed projectile points
- Extended human burials and associated artifacts
- Charmstones.

Middle Period (6,000–3,000 BC)

The Middle Period is characterized by a more diversified and generalized subsistence pattern, including hunting, fowling, and fishing, as well as an increased emphasis on seed processing. Sites in this cultural period display the following attributes:

- Distinctive spindle-shaped charmstones
- Bedrock and cobble mortars and pestles
- Chisel-ended pestles
- Large projectile points
- Extensive use of bone tools, such as awls, fish spear tips, saws, and flakers
- Tightly flexed burials with few associated artifacts
- Cremations

- Evidence of violent death, as indicated by disarticulated skeletons with embedded weapon points
- Olivella and Haliotis shell beads and other ornaments.

Late Period (3,000–150 BC)

The Late Period represents the occupation of the ethnographic Yokuts, Tubatulabal, and Monache. During the Late Period, subsistence began to focus on the intensive processing of acorns and other plant foods, with a proportional decreased emphasis on hunting, fowling, and fishing. Typical artifacts of this period include the following:

- Olivella and Haliotis shell beads and other ornaments, stone beads and cylinders, and clamshell disk beads
- Tubular smoking pipes of schist and steatite
- Arrow shaft straighteners
- Flat-bottomed mortars and cylindrical pestles
- Small side-notched projectile points for use with the bow and arrow
- Flexed burials and cremation.

Ethnographic Setting

Much of the San Joaquin Valley and Sierra Nevada foothills have been occupied throughout most of the Holocene Epoch (10,000 Before Present (BP)). The reconstruction of cultures that occupied the area during the late Paleoindian to early Archaic periods (9,000–3,000 BP) has proven difficult due to erosion and the depositional patterns of the San Joaquin (County of Tulare 2010a, 2010b).

Much of the literature has supported the notion that the inhabitants of the San Joaquin Valley were mainly situated along the banks of major waterways, wetlands, and streams. Many of the earliest archaeological records for the region have likely been buried beneath the vast alluvial deposits created by erosion and depositional processes indicative of the valley and Sierra Nevada foothills, especially over the last 9,000 years (County of Tulare 2010a, 2010b).

Tulare County was inhabited by indigenous California Native American groups, which included the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal. Most information regarding these groups is based on Spanish government and Franciscan mission records of the eighteenth and nineteenth centuries, and in studies conducted during the 1900s–1930s by American and British ethnographers. The ethnographic setting presented below is derived from the early works, as compiled by W.J. Wallace, Robert F.G. Spier, and Charles R. Smith (County

of Tulare 2010a, 2010b), with statistical information provided by the California Native American Heritage Commission (NAHC).

Of the indigenous California Native American groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory, which encompassed the crest of the Diablo Range on the west and the foothills of the Sierra Nevada on the east, and the Kings River on the north to the Tehachapi Mountains on the south. The Foothill Yokuts inhabited the western slopes of the Sierra Nevada, between the Fresno River and Kern River, with settlements generally occurring between 2,000–4,000 feet in elevation. The Tubatulabal inhabited the Sierra Nevada, at the higher elevations; near Mt. Whitney in the east, extending westward along the drainages of the Kern River; and along the Kern River–South Fork. The Monache consisted of six small groups that lived in the Sierra Nevada east of the Foothill Yokuts, in locations ranging between 3,000–7,000 feet in elevation (County of Tulare 2010a, 2010b).

Archaeological Resources

Potential prehistoric and historic archaeological resources were identified within the vicinity of the proposed action through consultation with the NAHC, records searches, pedestrian surveys, and other information sources. Commenters expressed concern in the *San Joaquin Cross Valley Loop 220 KV Transmission Line Project Final Environmental Impact Report* (CPUC 2010) that the survey area may traverse land of special value to the Yokuts Indians, in particular, the Yokuts’ “Sacred Creation Place” in the San Joaquin Valley. In January 2008, a search of the Sacred Lands File was requested for the survey area. The NAHC responded that there were sacred sites within the project area, but it could not specify whether the sites were located near the survey area (SCE 2012).

Records searches of the California Historical Resources Information System (CHRIS), Southern San Joaquin Valley Information Center, in 2007, 2008, and 2009 identified eight cultural resources previously recorded within 0.25 mile of the proposed transmission line. None of these sites are within the API or ADI for the proposed action.

Field surveys were conducted in 2007, 2011, and 2012 consisting of an intensive pedestrian survey centered on the centerline of the proposed alignment. The survey corridor was 300 feet wide where the proposed alignment would traverse the Big Creek 1-Rector and Big Creek 3-Rector transmission line ROW, 200 feet wide for the proposed alignment outside of the Big Creek 1-Rector and Big Creek 3-Rector transmission line ROW area, and 150 feet at access roads and proposed ancillary uses. These corridors were surveyed by archaeologists walking parallel to each other and spaced no more than 50 feet apart. One prehistoric archaeological resource was identified and is shown in Table 10-1 (21 other historic resources were also identified and are discussed later).

**Table 10-1
Potential Prehistoric Archaeological Resources Identified**

Site Name	Site Description	Within API?	Within ADI?
P-54-004847 (CA-TUL-3005)	Prehistoric milling stations	Yes	No

Source: Pacific Legacy Inc. 2012

The P-54-004847 (CA-TUL-3005) prehistoric archaeological resource consists of five milling station features in five discrete locations on a large, exposed granitic outcrop, situated on a hilltop and hillslope within the API for the proposed action. The milling stations were found to only contain milling slicks, and two handstones were identified on the outcrop near the milling stations. No mortar cups, midden-stained soils, or flaked stone were observed (Pacific Legacy Inc. 2012).

10.1.2 Historical Background

Historical Setting

In 1822, the colonial territory of Mexico won its independence from Spain and established a republic. California remained a territory of Mexico, and the area became home to a new group of ranchers and settlers that arrived to take advantage of large land grants being offered by the new government. During the 1840s, Mexico awarded five grants (known as ranchos) on what later became Tulare County lands. However, in 1860, Kern County was formed from a portion of Tulare County and all five Tulare County ranchos were included within the new Kern County boundaries (Tulare County 2010a, 2010b).

In 1846, hostilities between Mexico and the United States led to war. The war ended in 1848, and the United States and Mexico signed the Treaty of Guadalupe Hidalgo. As part of the post-war arrangements, Mexico ceded California and the Southwest to the United States. In 1848 and 1849, the discovery of gold in Northern California brought tens of thousands of miners, merchants, and speculators to the area. By 1850, the huge influx of prospective citizens allowed California to skip the usual stage of territorial status, and enter the union as a state. In 1852, Tulare County was formed from the southern portion of Mariposa County (County of Tulare 2010a, 2010b).

Early settlement in the Tulare County area focused on ranching. In 1872, the Southern Pacific Railroad entered Tulare County, connecting the San Joaquin Valley with markets in the north and east. Valley settlers began constructing a series of water conveyance systems (canals, dams, and ditches) across the San Joaquin Valley. With ample water supplies and the assurance of rail transport for commodities such as grain, row crops, and fruit, a number of farming colonies soon appeared throughout the region. Colonies such as Mt. Whitney, Orosi, Oakview, Holliday, Vina,

and McCall’s offered affordable farmland, water, and modern transportation. The colonies grew to become cities such as Tulare, Visalia, Porterville, and Hanford. Visalia, the Tulare County seat, became the service, processing, and distribution center for the growing number of farms, dairies, and cattle ranches. The construction of Highway 99 during the 1950s, affordable housing, light industry, and agricultural commerce brought steady growth to the entire San Joaquin Valley area (County of Tulare 2010a, 2010b).

Historical Resources

As previously described, potential prehistoric and historic archaeological resources were identified within the vicinity of the proposed action through consultation with the NAHC, records searches, pedestrian surveys, and other information sources. Records searches indicated that eight cultural resources were previously recorded as within 0.25 mile of the proposed action. However, none of these sites were within the API for the proposed action.

Field surveys identified 21 potential historical resources. These potential historical resources are summarized in Table 10-2 and described in further detail following the table.

**Table 10-2
Potential Historical Resources Identified**

Site Name	Site Description	Within API?	Within ADI?
P-54-004873 (CA-TUL-3025H)	Matthews Ditch	Yes	No
P-54-004851	Garage	Yes	No
P54-004874 (CA-TUL-3026H)	St. John’s River levees	Yes	No
P-54-004875 (CA-TUL-3027H)	Wutchumna Ditch	Yes	No
P-54-004876 (CA-TUL-3028H)	Mill Creek levees	Yes	No
P-54-004872 (CA-TUL-3024H)	Remains of a historic era structure	Yes	No
P-54-004877 (CA-TUL-3029H)	Cameron Creek Channel, levees, and bridges	Yes	No
P-54-004878	Residential structure with outbuildings	Yes	No
P-54-004879	Residential structures	Yes	No
P-54-004881	Residential structure with garage	Yes	No
P-54-004884 (CA-TUL-3030H)	Tulare Irrigation Canal	Yes	No
P-54-004856 (CA-TUL-3010H)P-54-004856	Cottonwood Creek levee	Yes	No
P-54-004888 (CA-TUL-3006H)	A historic era can dump/debris scatter	Yes	No
P-54-004034	Visalia Electric Railroad	Yes	No
CA-TUL-2873H	Friant-Kern Canal	Yes	No
CA-TUL-2880H	Southern Pacific Railroad	Yes	No
CA-TUL-2885H	Atchison-Topeka and Santa Fe Railroad	Yes	No
CA-TUL-2985H	A historic era debris scatter	Yes	Yes
Big Creek East and West Transmission Line (Big Creek 1 and 2 Line)	220 kV transmission line	Yes	Yes

**Table 10-2
Potential Historical Resources Identified**

Site Name	Site Description	Within API?	Within ADI?
Vincent Transmission Line (Big Creek 3 Line)	220 kV transmission line (Yes	Yes
Agricultural Landscape	The Historic Agricultural Landscape in the Visalia area	Yes	Yes

Source: Pacific Legacy Inc. 2012.

P54-004873 (CA-TUL-3025H)

This historic resource is the Matthews Ditch, which is a historic irrigation feature that is a contributing element to the historic agricultural landscape. The association of this resource with the agricultural past in the San Joaquin Valley makes it eligible for listing in the CRHR. The proposed alignment and a demolition site would intersect this resource.

P54-004851

The historic-era resource is a wood framed shed or garage constructed of vertical wood planks and is located approximately 90 feet from the centerline of the proposed alignment. The precise age of the structure is unknown, but based on the structural features it is estimated to be over 50 years in age. Although the structure appears to be a shed or garage, remnants of livestock housing and feeding apparatus are present on the west side of the structure, and a wooden fence that was possibly used for livestock surrounds the structure.

P54-004874 (CA-TUL-3026H)

The St. John’s River Levees are considered a historic-era resource within the API for the proposed action. Specifically, the resource is located within 60 feet of a structure work area. This water-transport feature may be eligible for listing in the California Register of Historical Resources (CRHR) because this feature was created in the context of rural cooperatives formed to construct and maintain irrigation systems in the area, and they represent a type of construction distinctive to the agricultural industry that developed.

P54-004875 (CA-TUL-3027H)

The Wutchumna Ditch is considered a historic-era resource that would be eligible for listing in the CRHR as a contributing element of historic agricultural landscape. The resource is intersected by the proposed alignment, within 120 feet of a demolition site associated with the proposed action, and within 20 feet of a proposed access road.

P54-004876 (CA-TUL-3028H)

This historic resource is the Mill Creek Levees that are a contributing element to the historic agricultural landscape and are eligible for listing in the CRHR. The proposed alignment and a demolition site would intersect this resource.

P54-004872 (CA-TUL-3024H)

The historic-era resource appears to be the remains of a barn or similar structure that is known to have existed in this location in 1950. The remains include wood, concrete, and metal debris from the structure, a fallen fence, a few standing wooden posts, piles of lumber, and an intact truck ramp for an animal pen. It is likely that some of the debris was placed here after the structure had been destroyed.

P54-004877 (CA-TUL-3029H)

The Cameron Creek Channel, levees, and bridges are known to have existed in 1951 and are considered contributing elements to the historic agricultural landscape, making them eligible for listing in the CRHR. This resource is intersected by the proposed alignment and located approximately 20 feet from a proposed demolition site.

P54-004878

The resource consists of a complex of historic or potentially historic structures, including two gable-roofed ranch houses, a wooden barn with a corrugated sheet metal roof, a small cinderblock outbuilding, as well as a timber-framed and corrugated sheet metal structure believed to be a garage. The surrounding landscape is composed of orchards, and the non-residential buildings are consistent with use as agricultural facilities.

P54-004879

The resource consists of two historic era residences on Mineral King Avenue in Visalia. The residence closest to the road is a single-story house with clapboard siding, similar to a Craftsman-style house, but with a pyramidal roof. The residence farthest from the road is a two-story National Folk or Folk Victorian-style house with a pyramidal roof and clapboard siding. The houses are on a large lot adjacent to a kiwi orchard (to the east and north). Mineral King Avenue passes east–west immediately south of the houses, and Highway 198 extends east–west immediately south of Mineral King Avenue. Another orchard is to the west of the houses.

P54-004881

The historic-era resource is a single-story Minimal Traditional style house with clapboard siding, a low-gabled roof, and a wood-framed and corrugated sheet metal garage, to the northeast of the house. The garage is in poor condition, but the house looks to be in good repair. The buildings are located on a large lot in a residential neighborhood, surrounded by newer houses, adjacent to orchards and empty fields. The yard is littered with debris and what appear to be non-functioning cars.

P54-004884 (CA-TUL-3030H)

The Tulare Irrigation Canal is a water feature associated with the historic agricultural landscape and is therefore eligible for listing in the CRHR. The resource is intersected by the proposed alignment and by a new proposed access road.

P54-004856 (CA-TUL-3010H)

The Cottonwood Creek Levee is a historic area resource located within the ADI and API of the proposed action. This historic resource is intersected by the proposed alignment and in a general disturbance area for construction associated with the proposed action. The Cottonwood Creek Levee is eligible for listing in the CRHR as a contributing element of historic agricultural landscape.

P54-004888 (CA-TUL-3006H)

The site is a historic-era can dump and debris scatter within a granitic bedrock outcrop on a hillslope, just below the knoll. Two discrete areas were identified with a concentration of cans that are mainly smashed and highly fragmented, with only a few intact cans present. A total of 16 artifacts were identified and includes 15 cans and a portion of a molded water tumbler. Of the 15 cans, only 6 different can types are represented, which includes 6 square fuel cans, 3 gallon-paint cans, 2 fish cans, 2 hole-in-cap cans, 1 sanitary can, and 1 lap seam can. The site likely dates between 1919 and the 1930s based on artifact date ranges in the two concentrations, which predate the nearby Friant-Kern Canal.

In 1892, the parcel on which the site is located contained a residence and a road oriented east–west, which ran near the site location. Topographical maps from 1926 show no structures near the site location, which suggests the site is not a primary refuse deposit (Pacific Legacy 2012). Based on the site location, the artifact scatter is not located near any historical structures; however, it is near the historical road and may represent opportunistic dumping episodes from passersby.

P-54-004034

Two segments on the Visalia Electric Railway have been previously documented in Tulare County. This 100-foot-long, north–south segment of the resource, on the east side of Road 204,

no longer exists. The resource is no longer present to the north or south of Road 204 and the east side of Road 204 has been planted with olive trees. The Visalia Electric Railroad was a subsidiary of the Southern Pacific Railroad, operating in Tulare County from 1906 to 1990.

CA-TUL-2873H

Three segments or points on the Friant-Kern Canal have been previously documented in Tulare County. The Friant-Kern Canal is part of the larger Central Valley Project and was constructed to transport water from the San Joaquin River south to the Bakersfield area in Kern County. The canal was built by the U.S. Bureau of Reclamation between 1945 and 1951. The canal continues to function in the HCP Permit Area, and all features of the system still exist.

CA-TUL-2880H

Four segments or points on the Southern Pacific Railroad have been previously documented in Tulare County. One point within the API and ADI for the proposed action is in Visalia on Road 148, immediately north of the Rector Substation. The other point within the API and ADI for the proposed action is located northwest of Ivanhoe on Road 148. The Southern Pacific Railroad is one of many railroads that were established in the San Joaquin Valley in the late 1800s. The railway continues to function in the HCP Permit Area, and all features of the system still exist.

CA-TUL-2885H

Four segments or points on the Atchison–Topeka and Santa Fe Railroad have been previously documented in Tulare County. This segment of the resource is documented in the area of Twin Buttes, near Visalia, from Avenue 376 southeast for approximately 6,500 feet. The railroad line no longer functions; only portions of the railbed and one intact section of rail that crosses Road 164 remain. The railroad operated from 1898 through 1992, after which time most of the tracks were decommissioned and removed.

CA-TUL-2985H

The site, a very light-density historic-era debris scatter, is recorded in an existing Southern California Edison (SCE) ROW and access road on the St. John's River flood plain, as well as the ADI for the proposed action. In 2007, initial site recording noted eight historical artifacts (ceramics, n=5, and glass, n=3) and some brick fragments in eight locations scattered across the site. The reported artifact density was low, and there was modern debris spread randomly across the site. In 2012 some modern debris was present in the immediate site area, and a modern dump was noted approximately 1,000 feet north of the site.

The 2012 testing collected 30 historical artifacts and noted the presence of 287 pieces of modern debris mixed in with the historical artifacts. The collected artifacts included 1 prehistoric

obsidian flake, 5 total fragments of freshwater mussel shell and faunal bone that are likely modern, and 24 historic-era artifacts. Overall, the historical assemblage was primarily domestic.

Big Creek East and West Transmission Line

The Big Creek East and West Transmission Line were built in 1912–1913 to bring power to Los Angeles from the Big Creek Nos. 1 and 2 powerhouses located in the Sierra National Forest. These existing transmission lines are contributing elements of the Big Creek Hydroelectric System Historic District (BCHSHD). The generation and transmission facilities of the Big Creek system dating between 1911 and 1929, the period of significance for the BCHSHD, are eligible for listing in the National Register of Historic Places (NRHP) and CRHR. The historic transmission system has remained substantially intact along its entire 241-mile length, and even though conductors and insulators on the lines may have been changed in the past, this has not diminished the historical integrity of the system. The Magunden Switching Station, located approximately 175-miles of Big Creek near Bakersfield, was the only interruption installed along the 241-mile span during the initial phase of construction (HAER No. CA-167-N). Additional, switching stations (substations) were added later. The proposed action would affect approximately 11 miles of the Big Creek East and West Transmission Line.

Rector Substation

The Rector Substation was constructed in 1927, during the great expansion phase of construction of the Big Creek System. The Big Creek East and West Transmission Line pass through the Rector Substation. Facilities at Rector Substation have been modernized over the years, and modifications, such as upgrading control systems or transformers and switchyard equipment, are considered part of the historic use of the substation. Therefore, the substation retains adequate integrity of setting, workmanship, materials, feeling, and association to meet the NRHP and CRHR criteria for listing as a contributing element of the BCHSHD.

Vincent Transmission Line

The Vincent Transmission Line was constructed in 1925–1927 to bring power from the newly constructed Big Creek Powerhouse No. 3 to Los Angeles and spanned 244 miles to the Cresenta Substation in LaCanada. The generation and transmission facilities of the Big Creek system dating between 1911 and 1929, the period of significance for the BCHSHD, are eligible for listing in the NRHP and CRHR. The historic transmission system has remained substantially intact along its entire 244-mile length, and even though conductors and insulators on the lines may have been changed in the past, this has not diminished the historical integrity of the system. The Vincent Line is a contributing element to the BCHSHD. The proposed action would remove two original Vincent (Big Creek 3 Line) towers within the Big Creek 3-Springville portion of the line.

Agricultural Landscape

The agricultural landscape, which includes all orchard land on the valley floor, has been evaluated as eligible for listing in the CRHR per Criterion 1 because of the contribution of these lands to the historic development of the California citrus industry, for which the Visalia area is known (SCE 2012). The agricultural landscape includes citrus groves and other cultivated landscape, transportation infrastructure, and water infrastructure, as well as other historically significant agricultural buildings and structures. The water-transport features in the transmission east–west alignment ROW may be eligible for listing in the CRHR per Criterion 3 because some of these features were created in the context of rural cooperatives formed to construct and maintain irrigation systems in the area, and they represent a type of construction distinctive to the agricultural industry that developed. In the vicinity of the transmission alignment, these features retain integrity of location, setting, materials, workmanship, feeling, and association (SCE 2012).

The proposed alignment would be located in the vicinity of numerous irrigation and water-transport structures that are essential to the agricultural industry on the eastern portion of the San Joaquin Valley and made the agricultural industry in the greater Visalia area possible, including the Matthews Ditch (P-54-004873 (CA-TUL-3025H), St. John’s River levee (P-54-004874 (CA-TUL-3026H), Wutchumna Ditch (P-54-004875 (CA-TUL-3027H), Mill Creek levee (P-54-004876 (CA-TUL-3028H), the Cameron Creek channel and levees (P-54-004877 (CA-TUL-3029H), Tulare Irrigation District Canal (P-54-004884 (CA-TUL-3030H), and Cottonwood Creek levee (P-54-004856 (CA-TUL-3010H) (SCE 2012). These potential historical resources are individually indicated in Table 10-2. The development of transportation and water systems and related modification of the natural landscape for the planting of citrus groves has resulted in a historic landscape that dates to the last half of the nineteenth century (SCE 2012).

10.1.3 Paleontological Background

Paleontological Setting

During the Tertiary Period (65–2 million years ago), the Sierra Nevada eroded to mere hills compared to their earlier form, and the Coast Ranges rose, thereby forming the San Joaquin Valley (which comprises the southern portion of the Great Central Valley). The Great Central Valley is enclosed by the Siskiyou, Sierra Nevada, Tehachapi, and Coast Ranges on the north, east, south, and west, respectively (County of Tulare 2010a, 2010b).

The Sierra Nevada formed about 200 million years ago during the Jurassic Period (144–208 million years ago). During this time, the area that would become the San Joaquin Valley lay off shore several thousand feet below the surface of the Pacific Ocean. Sediment from the Sierra Nevada and the movement of the Earth’s plates (tectonic action) facilitated the accumulation of material into the Late Cretaceous Period (65–75 million years ago) (County of Tulare 2010a, 2010b).

The Jurassic and Cretaceous periods brought flowering plants, early dinosaurs, and the first birds and mammals. The basic form of the Great Central Valley rose during the Cenozoic Period from the Pacific Ocean, first as islands, then as mountains attached to the ocean valleys below them (County of Tulare 2010a, 2010b).

The Paleocene Period (58–66 million years ago) witnessed the extinction of the dinosaur and the development, and later dominance, of the mammal. During the Eocene Epoch (53–39 million years ago), the western edges of the San Joaquin Valley rose above sea level for the first time. Sedimentation and uplift of geological formations continued until 2 million years ago (County of Tulare 2010a, 2010b).

The Holocene Epoch (10,000 years to present) brought the San Joaquin Valley above sea level, and humans entered the area. Freshwater lakes, rivers, and thousands of feet of rich alluvium formed the valley floor (County of Tulare 2010a, 2010b).

According to the University of California Museum of Paleontology, 12 paleontological resources have been recorded in Tulare County, generally within the valley portion of the county. These resources primarily consist of invertebrate, vertebrate, and plant fossils (County of Tulare 2010a, 2010b).

Regional Geology

Holocene alluvium and basin deposits are too young to contain in situ fossils and have low paleontological sensitivity. Igneous and metamorphic rocks, due to the mechanism of their formation, are generally unsuitable for fossil formation or preservation and are considered low sensitivity. However, older sediments of Pleistocene age have moderate to high paleontological sensitivity (Paleo Solutions 2012).

Pleistocene alluvium contains locally abundant and well-preserved fossil remains and is regarded as having high paleontological sensitivity in Southern California. Most of these fossils are housed at museums such as the Los Angeles Natural History Museum, San Bernardino County Museum, Page Museum (La Brea Tar Pits), San Diego Natural History Museum, Ralph Clark Park, and other regional repositories. These deposits are similar to those found in the northern portion and east–west ROW of the alignment (Paleo Solutions 2012).

No such fossils were recorded in the survey area, or located within the survey area in the Los Angeles Natural History Museum collections. One fossil from this formation (which may be part of the Riverbank Formation, per the Los Angeles Natural History Museum) was located approximately 30 miles south of this study area. No fossils were located in Tulare County using the Miocene Mammal Mapping project (Paleo Solutions 2012).

The riverbank formation is a Quaternary terrestrial formation, chiefly composed of alluvial fan deposits, generally unconsolidated gravel, sand, silts, and clays that may be a reddish to orangish hue locally. This formation is approximately 600,000 years in age and has produced fossil assemblages elsewhere in the state, particularly near Fresno and in the Sacramento Valley (Paleo Solutions 2012).

Paleontological Resources

The proposed alignment is located on the flatter portions of a southwestward-sloping alluvial fan, interspersed with igneous rock outcrops. The majority of the proposed alignment within the north-south portion is located on surficial sedimentary deposits of the Holocene with some late Pleistocene sediments at the northernmost portion of the proposed alignment, including recent alluvium (Qf), recent basin deposits (Qb), and older Pleistocene non-marine deposits (Qc) (Paleo Solutions 2012). The east-west portion of the proposed alignment crosses mainly through areas mapped as Pleistocene non-marine deposits (Qc), igneous and metamorphic rocks (m, pre-Cretaceous metamorphic, and gr, Mesozoic granitic rocks), and some younger Holocene-aged alluvium (Qa) (Paleo Solutions 2012). The potential fossil yield of these formations is summarized below in Table 10-3. The proposed alignment lies within very low, low, and moderate paleontological resource sensitivity as shown in Figure 10-1.

**Table 10-3
Potential for Paleontological Resources**

Unit	Abbreviation	Age	Typical Fossils Found	Potential Fossil Yield Category
Metamorphic Rocks	m	Pre-Cenozoic	None	Very Low (1)
Granitic Rocks	gr	Mesozoic	None	Very Low (1)
Fan Deposits	Qf	Recent (Holocene)	None	Low (2)
Basin Deposits	Qb	Recent (Holocene)	None	Low (2)
Alluvium	Qa	Recent (Holocene)	None	Low (2)
Pleistocene Non-marine	Qc	Pleistocene	Vertebrates and plants possible, although none recorded near HCP Permit Area	Moderate (3)

Source: Paleo Solutions 2012.

A survey of the proposed alignment ROW was conducted in 2011, but no paleontological resources were found during the survey. The areas mapped as Pleistocene non-marine deposits (Qc) are largely disturbed by agricultural fields and orchards, and no outcrops of Pleistocene non-marine deposits (Qc) were identified in the survey, likely due to agricultural disturbance or heavy brush cover.

10.2 IMPACT ANALYSIS REGULATORY FRAMEWORK

Federal Regulations

The following federal regulations pertaining to cultural resources would apply to the implementation of the HCP.

National Historic Preservation Act

The National Historic Preservation Act (16 U.S.C. 470 et seq.) establishes the nation’s policy for historic preservation and sets in place a program for the preservation of historic properties by requiring federal agencies to consider effects to significant cultural resources (e.g., historic properties) prior to undertakings.

Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of projects on historic properties (resources included in or eligible for the NRHP). It also gives the Advisory Council on Historic Preservation and State Historic Preservation Officers an opportunity to consult. Federal agencies issuing permits for the proposed action will be required to comply with National Historic Preservation Act requirements.

Archaeological and Historic Preservation Act of 1974

The Archaeological and Historic Preservation Act (16 U.S.C. 469 et seq.) requires federal agencies to provide for the “preservation of historical and archaeological data which might otherwise be irreparably lost or destroyed as the result of ... any alteration of the terrain caused as a result of any federal construction project or federal licensed activity or program.” The Archaeological and Historic Preservation Act expanded the federal Historic Sites Act of 1935 by focusing on significant resources, but it does not require significant resources to be of “national” significance. The Archaeological and Historic Preservation Act establishes historical and archaeological preservation requirements that are applicable to any project expected to result in the loss or destruction of significant scientific, historical, and archaeological data. The requirements are designed to avoid unnecessary damage to significant archaeological resources by modification of project design or recovery of threatened resources.

Archaeological Resources Protection Act of 1979

The Archaeological Resources Protection Act (16 U.S.C. 470aa et seq.) was primarily established to provide more effective law enforcement to protect public archaeological sites. The act provided a detailed description of prohibited activities and monetary and incarceration penalties associated with looting or vandalizing an archaeological site on federal lands. Another focus of the Archaeological Resources Protection Act is the regulation of legitimate archaeological investigation on public lands and the enforcement of penalties against those who loot or vandalize archaeological resources.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 et seq.) established the rights of Native American lineal descendants, Indian tribes, and Native Hawaiian organizations regarding the treatment, repatriation, and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony (items all collectively referred to as “cultural items”) with which they can show a relationship of lineal descent or cultural affiliation. One of the purposes of the plan is to require federal agencies to consult with applicable tribes regarding the disposition of Native American cultural items whenever cultural items are expected to be encountered during federal actions.

Executive Order 11593, “Protection and Enhancement of the Cultural Environment”

Executive Order 11593 (36 FR 8921) (1) orders the protection and enhancement of the cultural environment through requiring federal agencies to administer the cultural properties under their control in a spirit of stewardship and trusteeship for future generations; (2) initiates measures necessary to direct their policies, plans, and programs in such a way that federally owned sites, structures, and objects of historical, architectural, or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the people; and (3) in consultation with the Advisory Council on Historic Preservation (16 U.S.C. 4701), institute procedures to assure that federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures, and objects of historical, architectural, or archaeological significance.

Executive Order 13007, Protection and Preservation of Native American Sacred Sites

Executive Order 13007 was established to better protect important Native American sites and protect and preserve Native American religious practices. Section 1 of the executive order states the following:

- (a) In managing Federal lands, each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act (42 U.S.C. 1996) establishes a national policy to protect the right of Native Americans and other indigenous groups to exercise their traditional

religions. As with Executive Order 13007, federal agencies issuing permits for the proposed action would be required to comply with this act if Native Americans identified issues regarding their right to exercise traditional religious practices.

American Antiquities Act of 1906

The American Antiquities Act of 1906 (16 U.S.C. 431 et seq.) was the first U.S. law to provide for the protection of historical or cultural resources. Section 2 of the statute gives the president the authority to protect and conserve “historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States....” Section 3 of the act requires that unearthed historical and cultural resources be placed in public museums for preservation and public benefit. The act also provides penalties for the damage or destruction of antiquities.

State Regulations

The following State of California regulations pertaining to cultural resources would apply to the proposed action.

California Public Resources Code (Section 5097.98)

Section 5097.98 of the California Public Resources Code addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. It has been incorporated into Section 15064.5(e) of the California Environmental Quality Act (CEQA) Guidelines. The proposed action would be required to comply with Section 5097.98 of the California Public Resources Code should any unknown human remains be discovered during site disturbance.

California Health and Safety Code, Sections 7050.5, 7051, 5052, and 7054

Sections 7050.5, 7051, 5052, and 7054 of the California Health and Safety Code collectively address the illegality of interference with human burial remains, as well as the disposition of Native America burials in archaeological sites. The law protects such remains from disturbance, vandalism, or inadvertent destruction, and establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including the treatment of remains prior to, during, and after evaluation, and reburial procedures.

California Register of Historical Resources

The CRHR is an authoritative guide to identifying the state’s historical resources. It establishes a list of those properties that are to be protected from substantial adverse change (California Public Resources Code, Section 5024.1).

A historical resource may be listed in the CRHR if it meets any of the following criteria:

- a. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage
- b. Is associated with the lives of persons important in our past
- c. 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
- d. Has yielded, or may be likely to yield, information important in prehistory or history.

California Public Resources Code, Sections 5097.5 and 30244

Section 5097.5 of the California Public Resources Code prohibits “knowing and willful” removal, destruction, injury, defacement, and excavation upon any historic or prehistoric ruins, burial grounds, or archaeological or vertebrate paleontological site situated on public lands (lands under state, county, city, district, or public authority ownership or jurisdiction, or the ownership or jurisdiction of a public corporation), except where the agency with jurisdiction has granted express permission. Section 30244 requires reasonable mitigation for impacts on archaeological or paleontological resources that occur as a result of development on public lands.

Local Regulations

The following local/regional regulations pertaining to cultural resources would apply to the proposed action.

Tulare County General Plan

The following goals and policies identified in the Tulare County General Plan, Environmental Resources Management Section, may be applicable to the proposed action and alternatives:

- ERM-6:** To manage and protect sites of cultural and archaeological importance for the benefit of present and future generations.
- ERM-6.2: Protection of Resources with Potential State or Federal Designations.** The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation’s California Points of Interest and

California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.

- ERM-6.3: Alteration of Sites with Identified Cultural Resources.** When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site-specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource.
- ERM-6.4: Mitigation.** If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.
- ERM-6.6: Historic Structures and Sites.** The County shall support public and private efforts to preserve, rehabilitate, and continue the use of historic structures, sites, and parks. Where applicable, preservation efforts shall conform to the current Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.
- ERM-6.8: Solicit Input from Local Native Americans.** The County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.
- ERM-6.10: Grading Cultural Resources Sites.** The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20 Section 2501 et seq.

10.3 ENVIRONMENTAL CONSEQUENCES

10.3.1 Methodology for Impact Analysis

The setting of the proposed action was developed by reviewing available information on cultural and paleontological resources in the vicinity of the proposed action. The assessment of potential effects on cultural and paleontological resources entailed a qualitative evaluation of the proposed action's potential to conflict with existing and potential cultural and paleontological resources.

Identifying the Threshold of Significance

For the purposes of this Environmental Assessment (EA), an alternative would have a significant impact on cultural resources if it would:

- Cause an adverse change in significance of known or potential buried archaeological sites
- Cause an adverse change in significance of a historical resource
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

10.3.2 No Action Alternative

Direct and Indirect Effects

Under the No Action Alternative, the proposed HCP, including covered activities, would not be implemented and cultural and paleontological resources would not be affected by development of a transmission line in the HCP Permit Area. No new facilities would be constructed and existing facilities would not be altered, expanded, or demolished.

Under this alternative, the potential exists that future development in the HCP Permit Area could occur that is compatible with existing land uses. Under future conditions, reasonably foreseeable development that would normally occur under the No Action Alternative would include rural development, agricultural-related operations, some residential development, and capital improvement projects. These uses would cause ground disturbance during construction and operation that could adversely affect cultural resources. Impacts associated with development projects under the No Action Alternative would be addressed by CEQA or the National Environmental Protection Act (NEPA) on a case-by-case basis and would potentially provide mitigation for any impact to cultural resources.

Determination

Under the No Action Alternative, future development in the HCP Permit Area that is compatible with existing land uses could occur, including development that would involve ground-disturbing activities that could affect cultural resources. However, development under the No Action Alternative would be subject to CEQA and could be required to provide mitigation for any impact to cultural resources. Therefore, the No Action Alternative would result in no significant adverse effect on cultural or paleontological resources.

10.3.3 Proposed Action Alternative

Direct and Indirect Effects

Impact CUL-1: Change in significance of known or potential buried archaeological sites or disturbance of human remains.

Significant adverse effects to an archaeological resource would occur if the recorded archaeological resource has been determined to be significant. Adverse effects on an archaeological resource would also be considered significant if the resource has not yet been evaluated for significance or if additional testing is required in the affected area. In general, adverse effects to recorded archaeological resources would be less than significant if the resource has been evaluated and determined not to be significant or was previously destroyed. Archaeological resources that qualify as a historical resource are discussed under Impact CUL-2. Regarding human remains, significant adverse effects would occur if any human remains are disturbed, including those interred outside of formal cemeteries.

Archaeological resources are most often affected as the result of excavation or grading for installation of utilities and road construction. Archaeological resources may also suffer indirect effects as a result of covered activities that increase erosion or increase the accessibility of a surface resource, and thus increase the potential for vandalism or illicit collection.

As previously discussed, a total of 22 cultural resources were identified within the API or ADI of the proposed action, one of which (P-54-004847 (CA-TUL-3005) was determined to be a prehistoric archaeological resource. This prehistoric archaeological resource includes five milling station features containing milling slicks with two handstones identified near the milling stations (Pacific Legacy Inc. 2012). The archaeological resource is located within the API of the proposed action, including within 70 feet of an improved access road and guard pole where ground-disturbing work would occur. In order to minimize potential adverse effects, the proposed alignment and temporary work area near this archaeological resource have been designed to avoid the resource. As part of the proposed action, this archaeological resource would be flagged, avoided, and monitored during construction activities.

Although avoidance and monitoring of this known archaeological resource would occur, covered activities would result in potentially significant adverse effects on subsurface archaeological resources associated with this site (Pacific Legacy Inc. 2013). In order to reduce potentially significant adverse effects on this archaeological resource, SCE shall implement Environmental Commitment (EC) CUL-2. Additionally, there is still the potential for unrecorded, subsurface archaeological resources to be affected. Due to the potential for unrecorded subsurface archaeological resources to occur in the proposed HCP Permit Area, covered activities that would result in substantial grading or excavations in native soils may result in impacts to

unknown archaeological resources. Additionally, adverse effects to potential unrecorded archaeological resources associated with sacred sites—including the previously described Yokuts’ “Sacred Creation Place”—could occur. Depending on the sensitivity of these resources, these adverse effects may be significant. In order to reduce these potentially significant adverse effects, SCE shall implement EC CUL-1 through CUL-4.

Similarly, grading and excavation associated with covered activities could disturb unidentified, subsurface human remains and result in potentially significant adverse effects. To avoid potentially significant adverse effects to human remains, SCE shall implement EC CUL-5.

Impact CUL-2: Change in significance of a historical resource.

Historical resources can include buildings, structures, or objects that are at least 50 years of age and those that are historically significant. For historic structures and buildings, significantly altering the setting, remodeling, or moving the structure may diminish or destroy its integrity. However, under some conditions, a building that has been moved or altered may still retain its historic significance. In some cases, landscaping or landscape features also may contribute to the significance of a historic architectural property. Such elements are assessed as part of the setting of the historic architectural property. A substantial adverse change in the significance of a historical resource would have the potential to occur if the elements that contribute to its significance were damaged through direct or indirect impacts of the covered activities.

As previously discussed in Section 10.1.2, Historical Background, 21 historical resources were identified during within the API, 4 of which were determined to be within the ADI for the covered activities. The eligibility for listing in the CRHR or NRHP of each of these identified historic resources is shown in Table 10-4.

**Table 10-4
Eligibility of Identified Historical Resources**

Site Name	Eligibility Status	Within API?	Within ADI?
P54-004873 (CA-TUL-3025H)	Eligible for listing in CRHR (Criterion 3)	Yes	No
P54-004851	Not Evaluated	Yes	No
P54-004874 (CA-TUL-3026H)	Eligible for listing in CRHR (Criterion 3)	Yes	No
P54-004875 (CA-TUL-3027H)	Eligible for listing in CRHR (Criterion 3)	Yes	No
P54-004876 (CA-TUL-3028H)	Eligible for listing in CRHR (Criterion 3)	Yes	No
P54-004872 (CA-TUL-3024H)	Not Evaluated	Yes	No
P54-004877 (CA-TUL-3029H)	Eligible for listing in CRHR (Criterion 3)	Yes	No
P54-004878	Not Evaluated	Yes	No
P54-004879	Not Evaluated	Yes	No
P54-004881	Not Evaluated	Yes	No
P54-004884 (CA-TUL-3030H)	Eligible for listing in CRHR (Criterion 3)	Yes	No

**Table 10-4
Eligibility of Identified Historical Resources**

Site Name	Eligibility Status	Within API?	Within ADI?
P54-004856 (CA-TUL-3010H)P54-004856	Eligible for listing in CRHR (Criterion 3)	Yes	No
P54-004888 (CA-TUL-3006H)	Recommended Not Eligible for listing in CRHR and NRHP	Yes	No
P-54-004034	Not Eligible for listing in NRHP	Yes	No
CA-TUL-2873H	Eligible for listing in CRHR and NRHP	Yes	No
CA-TUL-2880H	Not Eligible for listing in NRHP	Yes	No
CA-TUL-2885H	Not Eligible for listing in NRHP	Yes	No
CA-TUL-2985H	Recommended Not Eligible for CRHR and NRHP	Yes	Yes
Big Creek East and West Transmission Line (Big Creek 1 and 2 Line)	Eligible for listing in NRHP	Yes	Yes
Rector Substation	Eligible for listing in NRHP	Yes	Yes
Victor Transmission Line (Big Creek 3 Line)	Eligible for listing in NRHP	Yes	Yes
Agricultural Landscape	Eligible for listing in CRHR (Criterion 1)	Yes	Yes

Source: Pacific Legacy Inc. 2012.

Potential adverse effects to the historic resources listed above that have been determined as not eligible or are have been recommended as not eligible for listing in the CRHR or NRHP would not be considered significant adverse effects. Historic resources within the API but outside of the ADI that were not evaluated or were determined eligible for listing in the CRHR or NRHP would be avoided by the covered activities and therefore, no adverse effects are expected.

Three historical resources, the Big Creek East and West Transmission Line (Big Creek 1 and 3–Rector 220 kV portion), Rector Substation and the Vincent Transmission Line (Big Creek 3–Springville 220 kV portion), that are eligible for listing in the NRHP as contributing elements of the BCHSHD are within the API and the ADI. Covered activities could alter portions of these resources, change the areas surrounding the transmission lines, and would remove two original Vincent towers.

A Historic American Engineering Record Level II has been prepared by SCE’s contractor Urbana Preservation and Planning LLC for the affected portions of the Big Creek East and West Transmission Line (CA-HAER-167-N) and has been accepted to the National Park Service (Letter dated January 31, 2013. A NRHP evaluation and documentation for the entire Vincent Line was prepared by SCE’s contractor Urbana Preservation and Planning LLC. Therefore, these historically significant portions of the transmission lines have been documented. As such, potential adverse effects from covered activities would be less than significant.

Construction, operation, and maintenance of Covered Activities in the HCP Permit Area would also affect areas that are considered to be within a historical agricultural landscape that was identified by SCE (2008). Although the exact boundaries of the historical agricultural landscape and all of the contributing historical resources have not been defined, the historical agricultural landscape is described as being inclusive of all orchard land on the valley floor and elements that have contributed to the historic development of the California citrus industry, for which the Visalia area is renown (SCE 2008). Covered activities would result in the permanent removal of citrus trees within the historical agricultural landscape, but would not remove any contributing transportation infrastructure, water infrastructure, or historically significant agricultural buildings and structures. The removal of a small number of citrus trees as a result of covered activities would not result in a perceptible visual change in the overall historic agricultural landscape. A vast majority of citrus trees, the defining feature of the agricultural landscape, would remain and would not preclude the eligibility of the historical agricultural landscape for listing in the CRHR or the NRHP. Additionally, an SCE contractor is developing a historic context and narrative for the historical agricultural landscape that would be displayed at the Tulare County Museum of Farm Labor and Agriculture (Pacific Legacy Inc. 2012). As such, the proposed action would result in less-than-significant adverse effects on the identified historic agricultural landscape.

Impact CUL-3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

A survey of the proposed alignment ROW was conducted in 2011 and did not identify any paleontological resources. However, paleontological resources are generally not apparent until revealed by excavation. As such, covered activities that would include excavation of undisturbed native sediment would have the potential to result in adverse effects if that area had a potential to yield paleontological resources.

As previously described in Section 10.1.3, Paleontological Background, the proposed alignment ROW traverses six different geological units, with two geological units having a very low paleontological sensitivity and three having a low paleontological sensitivity. One geological unit, mapped as Pleistocene non-marine deposits (Qc), has a moderate paleontological sensitivity and exists in portions of the east–west proposed alignment ROW. Therefore, covered activities that would involve excavation of undisturbed native sediment in the area mapped as Pleistocene non-marine deposits (Qc), which have a moderate paleontological sensitivity, could result in potentially significant direct adverse effects on paleontological resources. The areas where covered activities would include excavation of undisturbed native sediment in the Pleistocene non-marine deposits (Qc) geological unit are listed in Table 10-5. SCE has committed to implement paleontological monitoring, as described in the Paleontological Resource, Training, and Mitigation Plan (Paleo Solutions 2012). This would avoid potential direct adverse effects related to paleontological resources in these identified areas.

Table 10-5
Locations of Potential Adverse Effects on Paleontological Resources

Excavation Area/Structure Number	General Location
M61-T2 and areas north of Construction 50 West	North of intersection between north-south and east-west proposed alignments
Construction 57-66	Western portion of east-west proposed alignment near intersection between north-south and east-west proposed alignments
Construction 75, Construction 77-82, Construction 84-88, and Construction 90	Central portion of east-west proposed alignment
Construction 94-99	Eastern portion of east-west proposed alignment
Construction 100-104	Near eastern terminus of east-west proposed alignment
M172-T1 and M171-T4	Eastern terminus of east-west proposed alignment

Source: Paleo Solutions 2012.

Additionally, paleontological resources could potentially occur in soils or geologic units that are known to have low or very low paleontological resource sensitivity. Although unlikely, the covered activities that would include ground-disturbing work in native undisturbed sediment could disturb or destroy unanticipated paleontological resources. Therefore, the areas not identified above, including the Ivanhoe Laydown Yard and Road 156 Laydown Yard that are mapped in low paleontological sensitivity geological units, could result in potential direct adverse effects to paleontological resources. SCE has committed to implement the Paleontological Resource, Training, and Mitigation Plan (Paleo Solutions 2012) to avoid the potential direct adverse effects related to paleontological resources in these areas of low or very low paleontological resource sensitivity where excavation would occur.

Environmental Commitments

Archaeological Resources

CUL-1: Archaeological Test Excavations. In order to evaluate the identified archaeological resource for CRHR and NRHP eligibility, SCE shall have a qualified archaeologist conduct the following field work prior to commencement of construction:

- Fourteen shovel test probe units will be laid out and excavated at the locations and to the specification described in the *Plan of Work for Archaeological Test Excavations at Archaeological Site CA-TUL-3005 and California Register Of Historical Resources and National Register Of Historic Places Evaluation* (Pacific Legacy Inc. 2013) to determine if a cultural deposit is present, if additional milling features are present but obscured by topsoil, the depth to bedrock below the present soil surface, to confirm the existing boundaries or

expand the boundaries of the archaeological site, and to evaluate if the site is eligible for listing in the CRHR or the NRHP.

- If a discovery is made, with the exception of human remains, then the recovered archaeological materials will be collected, analyzed, catalogued, and the materials reburied on site, if feasible. The site record will be updated on standard California Department of Parks and Recreation DPR 523 forms to include the results and photographs of the evaluation program.

(This measure corresponds to Mitigation Measure 4.5-2a (CPUC 2010).)

CUL-2: Archaeological Construction Monitoring. A qualified archaeologist and Native American consultant shall monitor all grading and subsurface disturbance within 150 feet of recorded archaeological site locations and areas of high archaeological sensitivity. Areas of high archaeological sensitivity shall be determined prior to project construction between SCE and the archaeological contractor, taking into account Native American feedback regarding specific areas of cultural sensitivity.

- Prior to beginning any work that requires monitoring, the qualified archaeologist shall coordinate with SCE and the project manager on the construction schedule to identify when and where monitoring is to begin, including the start date for monitoring.
- The qualified archaeologist shall be present during grading/excavation and shall document such activity on a standardized form. A record of activity shall be sent to the project manager each month.
- If a discovery is made, and when requested by the qualified archaeologist, or the archaeological principal investigator if the archaeological monitor is not qualified as a principal investigator, the project manager shall be contacted and shall divert, redirect, or temporarily halt ground-disturbing activities in the area of the discovery to allow for preliminary evaluation of archaeological resources, in accordance with CUL-3.

(This measure corresponds to Mitigation Measure 4.5-4b (CPUC 2010).)

CUL-3: Evaluation of Inadvertent Archaeological Discoveries. In the event of a discovery, and when requested by the qualified archaeologist, or the archaeological principal investigator if the archaeological monitor is not qualified as a principal investigator, the project manager shall be contacted and shall divert, redirect, or temporarily halt ground-disturbing activities in the area of discovery to allow for preliminary evaluation of potentially significant archaeological

resources. The principal investigator shall also immediately notify the project applicant of such findings at the time of discovery.

- The significance of the discovered resources shall be evaluated by the principal investigator. For archaeological resources considered significant by the principal investigator with concurrence from SCE, a research design and data recovery program shall be prepared and reviewed and approved by SCE and carried out to mitigate impacts before ground-disturbing activities in the area of discovery shall be allowed to resume. SCE shall be responsible for providing notice to proceed after evaluation work has been completed.
- If human remains are discovered, mitigation measure **CUL-5** shall be implemented.
- The qualified archaeologist shall notify the project applicant, as appropriate, in writing of the end date of monitoring.
- Handling and Curation of Significant Artifacts and Letter of Acceptance:
 - The qualified archaeologist shall ensure that all significant cultural remains collected are cleaned, catalogued, and permanently curated with an appropriate institution; that a letter of acceptance from the curation institution has been submitted to SCE; that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
 - Curation of artifacts associated with the survey, testing, and/or data recovery for this proposed action shall be completed in consultation with a Native American representative, as applicable.
- Prior to completion of the proposed action, a copy of the monitoring report (including evaluation and data recovery documents), which describe the results, analysis, and conclusions of the archaeological monitoring program (with appropriate graphics), shall be submitted to SCE and the CHRIS Southern San Joaquin Valley Information Center. For significant archaeological resources encountered during monitoring, the research design and data recovery program shall be included as part of the final results report.

(This measure corresponds to Mitigation Measure 4.5-4b (CPUC 2010).)

CUL-4: Mitigation for Inadvertent Discoveries. If archaeological resources found during construction are determined to be significant after completion of significance evaluations in accordance with CUL-3, a qualified archaeologist, in

consultation with SCE and the U.S. Fish and Wildlife Service (Service), shall implement measures to avoid impacts to these archaeological resources. Where avoidance of a significant archaeological resource is not feasible, a qualified archaeologist, in consultation with the SCE and the Service, shall implement data recovery measures. Data recovery measures shall include the following:

- Prepare a research design and archaeological data recovery plan prior to the issuance of grading permits for the recovery of resources in unavoidable sites that will capture those categories of data for which the site is significant, and implement the data recovery plan prior to disturbance of the site.
- Data recovery measures shall be based on the results of the significance evaluation required in CUL-3, and shall focus on recovering archaeological data sufficient to mitigate the destruction of a portion or the entire site within the APE.
- If, in the opinion of the qualified archaeologist and in light of the data available, the significance of the site is such that data recovery cannot capture the values that qualify the site for inclusion on the CRHR, the applicant shall reconsider plans for the covered activities in light of the high value of the cultural resource, and implement more substantial modifications to the covered activities that would allow the site to be preserved intact, such as project redesign, or placement of fill.
- The amount and location of excavations shall be determined through the results of the significance evaluation phase in CUL-3. Following completion of the test excavations, all cultural materials shall be washed, cataloged, and analyzed. Technical analyses may include artifact analysis, radiocarbon dating, obsidian hydration, pollen and protein residue, and other analyses as needed to describe the cultural materials and archaeological deposits. A data recovery report shall be prepared and filed with the CHRIS Southern San Joaquin Valley Information Center.
- SCE shall provide for the permanent curation of recovered materials. Following completion of the data recovery program, SCE shall enter into an agreement with a facility for permanent curation of the collections.

(This measure corresponds to Mitigation Measure 4.5-4b (CPUC 2010).)

CUL-5: Treatment of Human Remains. If human remains are found during significance evaluations, data recovery, construction monitoring, or any project-related ground-disturbing activity, the remains shall be treated with appropriate dignity pursuant to the requirements of California Public Resources Code, Section 5097.98. The discovery of human remains shall trigger the following requirements:

- The project manager shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards, is not damaged or disturbed by further covered activities until the project manager has discussed and conferred with the Most Likely Descendants (MLD) about preferences for treatment, as described below, of the discovered remains.
- The qualified archaeologist on behalf of the project manager shall contact the Tulare County coroner to determine that no investigation of the cause of death is required. If the discovered remains are determined by the coroner, or an authorized representative, to be Native American, the medical examiner shall contact the NAHC.

The Tulare County coroner, in consultation with the NAHC and the MLD, may develop an agreement that applies to the discovery of human remains that meets the requirements of California Public Resources Code, Section 5097.98.

- The NAHC shall identify and contact the person or persons it believes to be the MLD from the deceased Native American.
- The landowner shall provide the MLD with access to the discovery location for inspection. The MLD must complete their inspection and make a recommendation for treatment of the remains within 48 business hours of their notification by either the NAHC or the project manager, whichever is earlier.
- Options for treatment include, but are not limited to:
 - Preservation of Native American human remains and associated items in place and avoidance of the adjacent area defined by a 100-foot radius
 - Nondestructive removal and analysis of the Native American human remains and associated items by a qualified archaeologist, osteologist, or physical anthropologist
 - Relinquishment of the Native American remains and associated items to the MLD for treatment
 - Reburial of the remains on the property by SCE at a location mutually agreeable to the MLD and SCE.
- If the MLD does not make a recommendation within 48 business hours, or if the recommendations are not acceptable to the County of Tulare following extended discussions and mediation pursuant to California Public Resources Code Sections 5097.98(b)(2) and 5097.94(k), SCE shall reinter the Native American remains and burial items with appropriate dignity on the site in a

location not subject to further subsurface disturbance. The location of reinterment shall be protected by one or more of the following:

- Record the site location with the NAHC or the CHRIS Southern San Joaquin Valley Information Center
- Record a document with the County of Tulare Recorder's Office.
- If multiple human remains are found, discussions shall be held with the MLD. If agreement on the treatment of these remains is not reached, the remains shall be reinterred in compliance with California Public Resources Code, Section 5097.98(e).

(This measure corresponds to Mitigation Measure 4.5-6 (CPUC 2010).)

Determination

With implementation of EC CUL-1 through CUL-5, as well as SCE's commitment to implement the Paleontological Resource, Training, and Mitigation Plan (Paleo Solutions 2012), it is not expected that the proposed action would result in significant adverse effects to archaeological resources and human remains, historical resources, or paleontological resources.

Cumulative Effects of the Proposed Action

The covered activities under the proposed action, in combination with other development in the study area, would have potentially adverse effects on cultural resources. This includes potentially significant adverse effects to unrecorded subsurface archaeological resources and human remains, removal of aspects of historical resources, and potential disturbance of subsurface paleontological resources; however, covered activities have been designed to avoid most of the cultural resources. Additionally, the proposed action would implement ECs that would reduce these adverse effects to a less-than-significant level. These include avoidance of resources, documentation resources, contingency procedures for inadvertent discoveries, and construction monitoring.

A potential cumulative impact to cultural resources could occur if the proposed action in combination with other past, present, and reasonably foreseeable projects would alter the significance of cultural resources or destroy potential paleontological resources. Cumulative projects could contribute to potentially significant cumulative effects. However, future projects would be required to comply with federal, state, and local regulations and ordinances protecting cultural resources. When considered in combination with other past, present, and reasonably foreseeable future projects, the contributions of the proposed action would not be cumulatively considerable due to the proposed documentation of cultural resources, preventative measures and design of covered activities, and contingency measures to be implemented for inadvertent discoveries of cultural resources.

Determination

The Service evaluated the past and present effects on cultural and paleontological resources as summarized in Sections 10.1, Affected Environment, and 10.2, Impact Analysis Regulatory Framework. Then the Service evaluated adverse effects of the reasonably foreseeable other projects, as summarized in Section 10.3, Environmental Consequences, and Chapter 3, Introduction to the Resource Chapters and the Effects Analysis. Finally, we added the incremental effects of the proposed action, as described in Section 10.3 to those other effects. We conclude that the small incremental effects of the proposed action and HCP, when added to the effects of the past, present, and reasonably foreseeable future projects on the cultural and paleontological resources in the study area, do not meet the identified thresholds of significance (Impacts CUL-1, CUL-2, and CUL-3) and are not considered significant.

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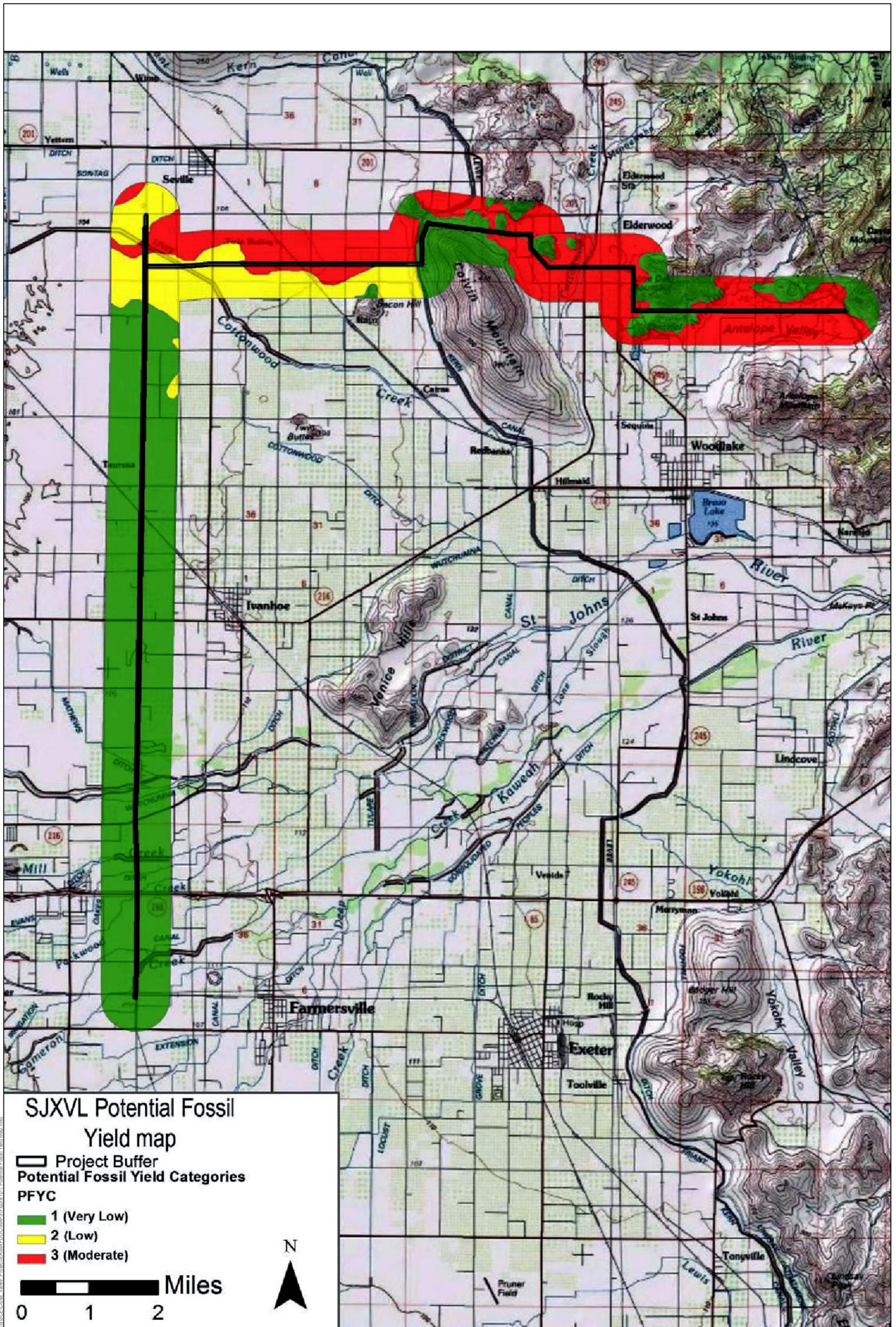
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SOURCE: (Paleo Solutions Inc. 2012)

FIGURE 10-1
Potential Fossil Yield Map

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CHAPTER 11.0 UTILITIES AND PUBLIC SERVICE SYSTEMS

This chapter describes the existing conditions pertaining to utilities, including water, sewer, solid waste, electric, natural gas, and telecommunication lines, as well as public service systems, including fire protection and emergency medical response, police services, schools, and other public facilities. This chapter also discusses the applicable regulatory framework related to federal, state, and local regulations, and evaluates the potential environmental consequences that could result from each alternative discussed in Chapter 2.

Public and agency comments received during early public scoping included concerns regarding impacts to utilities and service systems (e.g., disruption to satellite television, radio, and phones; enforcement to prevent graffiti off towers and poles and restrict off-road vehicles) within the project area and surrounding local jurisdictions (CPUC 2009). The proposed action will avoid nearby jurisdictions except for the County of Tulare (County) and City of Visalia (City), and thus utilities and service systems within the County and City are applicable to the proposed action.

11.1 AFFECTED ENVIRONMENT

This section describes the existing setting in the resource study area and identifies the resources that could be affected by the proposed action. For the purposes of this analysis, the resource study area for direct effects comprises the transmission line's proposed alignment plus a 1-mile radius. The area of indirect effects encompasses all of Tulare County.

Tulare County has been one of the fastest growing regions in California. This increased growth has resulted in an increased demand for electricity. Southern California Edison (SCE) has determined that the existing transmission line (Big Creek 1 – Rector), which delivers electricity to Rector Substation located southeast of Visalia, are operating at or near their limits and will be unable to deliver sufficient electricity to safely and reliably serve this increased demand. As a result, SCE will construct a new approximately 23-mile-long double-circuit 220-kilovolt (kV) transmission line that would connect Rector Substation to the existing 220 kV line from SCE's Big Creek hydroelectric facilities in the Sierra Nevada Mountains (Big Creek 3 and 4 – Springville) in order to meet increased demand for electricity in the Tulare County portion of the Electrical Needs Area. County and City utility and public service providers are described below.

Water

Tulare County

A multitude of domestic water service providers, both public and private, service the unincorporated areas of Tulare County. Providers include community service districts, sanitary districts, county service areas, irrigation districts, mutual water companies, and public utility districts. Individual water systems are the predominant water supply for domestic use within the

unincorporated communities of Tulare County (County of Tulare 2010b). If a water system has fewer than 200 service connections, it is overseen by the Tulare County Environmental Health Department. If the system has more than 200 service connections, it is regulated directly by the State of California Department of Public Health, Fresno office (CPUC 2009). The state does not regulate personal water wells with four or less service connections, though the Environmental Health Department performs some health testing during permitting processes (CPUC 2009).

City of Visalia

Water is primarily distributed by the California Water Service Company (Cal Water) and there is at least one mutual water district located within city limits. Cal Water's 75 active supply wells in the Visalia district extract groundwater from the Kaweah Groundwater Sub-basin and distribute it over approximately 519 miles of pipeline. The Cal Water system includes two elevated 300,000-gallon storage tanks, an ion exchange treatment plant, four granular activated carbon filter plants, and one nitrate blending facility. These facilities are in place to provide Cal Water's customers with safe drinking water (City of Visalia 2012). Adjacent communities and agricultural users rely on groundwater resources from wells in order to maintain sufficient water supplies and groundwater recharge.

According to the Urban Water Management Plan (UWMP), Cal Water has an estimated capacity to pump 100,829 acre-feet per year in 2010, relying completely on groundwater. Pumping capacity at this level would continue to keep up with demand requirements through 2030 and beyond (City of Visalia 2012).

Sewer

Tulare County

In unincorporated areas of Tulare County, special districts generally operate and manage sanitary sewer services. These special districts include public utility districts, community service districts, county service areas, sanitary districts, and sewer maintenance districts (County of Tulare 2010b). The Tulare County Resource Management Agency has jurisdiction over lands not included in these special districts; any permit for a project requiring sewage disposal in these areas must be approved by the Resource Management Agency (CPUC 2009). Individual or community septic systems serve some of the unincorporated urban areas within Tulare County that are lacking sanitary sewer infrastructure (County of Tulare 2010b).

City of Visalia

The Sewer System Master Plan for the City divides the system into eight service areas based on existing and proposed sewer trunklines and on the growth pattern established by the General Plan. Figure 5-4 of the City's General Plan Draft Element depicts the sewer lines within the City.

Storm Drainage

Tulare County

Storm drainage systems exist in various urban areas throughout Tulare County. Storm drainage infrastructure projects in the unincorporated areas of the County are generally constructed through redevelopment projects, and/or in conjunction with transportation improvements and site development projects (i.e., residential subdivisions). Localized storm drainage systems in unincorporated areas discharge to various surface waters including streams, rivers, ditches, other surface water courses, and ponding basins. Storm drain infrastructure in smaller communities generally consists of underground and surface collection facilities that transport the water to local retention ponds and/or local streams. Drainage infrastructure is typically installed within the County ROW, and is operated and maintained by the Tulare County Resource Management Agency (County of Tulare 2010b).

City of Visalia

In the City's Planning Area, storm and urban runoff drainage is provided by natural rivers and watercourses, irrigation ditches, storage reservoirs, and discharge locations. The City's Storm Water Master Plan identified seven waterways as well as the Goshen Drain that convey stormwater toward the southwest into a number of large basins on the west side of the City. Figure 5-5 of the City's General Plan Draft Element depicts the City's storm drainage system (City of Visalia 2012).

The planned system takes street and lot drainage into a storm drain pipeline system that is directed generally by gravity and augmented with lift pumps toward the main drain system. The system relies on detention basins to slow and divert stormwater for large storm events. The creeks and ditches used for stormwater also convey irrigation flows, a shared use system that is managed based on formal agreements between the City and irrigation agencies and companies (City of Visalia 2012).

Electricity and Natural Gas

Tulare County

SCE is the primary provider of electrical services throughout Tulare County, including the majority of the San Joaquin Valley and the foothills. Pacific Gas & Electric (PG&E) also serves northern Tulare County on a limited basis. The Gas Company (formerly Southern California Gas Company) is the primary provider of natural gas services in Tulare County (County of Tulare 2010b).

City of Visalia

SCE provides electric services to Visalia residents. The electrical facilities network includes both overhead and underground lines, with new development required to install underground service lines. Natural gas services are primarily provided by the Gas Company (City of Visalia 2012).

Telephone***Tulare County***

AT&T, Ducor, SBC, Sprint, and Verizon provide telephone services in Tulare County. These companies supply local and long-distance calling, wireless services, internet access, and other business solutions to residential and commercial customers (County of Tulare 2010b).

City of Visalia

AT&T, Sprint, and Verizon provide communication services to the City (City of Visalia 2012).

Solid Waste and Recycling Service***Tulare County***

There are three active landfills in Tulare County: Visalia Disposal Site, Woodville Disposal Site, and Teapot Dome Disposal Site. Private haulers licensed through Tulare County provide solid waste collection and disposal services to unincorporated areas of the County. Solid waste generated during construction within the HCP Permit Area would primarily be disposed of at the Visalia Disposal Site, which is located northwest of the City of Visalia. The Visalia Disposal Site is located on Road 80, north of Avenue 328, approximately 4 miles northwest of the City of Visalia, and is currently permitted to accept 2,000 tons of solid waste per day. It has an estimated remaining capacity of 16 million cubic yards (86.7%) until 2024 (Cal Recycle 2012).

City of Visalia

The City provides refuse collection for residential customers and many commercial customers, and contracts with Sunset Waste Systems to provide recyclable material processing. Various private haulers provide refuse, recycling, and green waste to the remainder of the commercial accounts, construction sites, and other cleanup jobs (City of Visalia 2012). In 1989, Assembly Bill (AB) 939, the Integrated Waste Management Act (IWMA), was passed and required jurisdictions to meet solid waste diversion goals of 25% by 1995 and 50% by 2000. In 2009, AB 737 amended the act to require CalRecycle to adopt programs to increase statewide diversion to 75% by 2020. AB 737 also addresses recycling in the largely under-served commercial sector. The Consolidated Waste Management Authority (CWMA) manages waste diversion activities

for eight local area members, including the County and the City. In 2008, the CWMA achieved a rate of 5.2 pounds per person per day of landfilled waste, and in 2009, it was 4.4 pounds per person per day, which is lower than the base rate of 6.2 pounds per person per day that would be required under the IWMA (City of Visalia 2012).

Fire Services

CAL FIRE

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for state responsibility areas (SRAs), and primarily fights wildland fires. The CAL FIRE Tulare Unit, which serves the resource study area, consists of eight stations in the following locations: Station 1 (Badger), Station 38 (Fountain Springs), Station 35 (Three Rivers), Station 37 (Porterville), Station 12 (Woodlake), Visalia, Station 32 (Tyler Creek), and Bear Creek Station. The unit also includes 1, 120-man conservation camp and Mountain Home Demonstration State Forest. The unit is equipped with 11 engines, 2 bulldozers, and an Air Attack (small airplane) and tanker on contract. In addition to station personnel, office staff, and administrators, the CAL FIRE Tulare Unit comprises 1 unit chief, 4 division chiefs, 8 battalion chiefs, 5 apparatus engineers, and 30 fire captains. The unit hires additional staff during summer months, including limited-term engineers and captains (CPUC 2009). CAL FIRE has a cooperative fire protection assistance agreement with Tulare County that took effect July 1, 2007.

Tulare County

The Tulare County Fire Department (TCFD) provides services to the residents and visitors of Tulare County. Its services include responding to fires, medical emergencies, motor vehicle accidents, technical rescues, and other life-threatening or dangerous conditions as the lead agency or in support of the agency having jurisdiction. The TCFD consists of 28 fire stations: Battalion 1 covers the northern portion of the County with 13 fire stations, while Battalion 2 covers the southern portion of the County with 15 fire stations. Equipment includes 84 vehicles ranging from light-duty utility vehicles to large aerial firefighting apparatuses. Field personnel include 6 battalion chiefs, 1 administration battalion chief, 21 fire captains, 51 fire lieutenants, and approximately 400 reserve firefighting personnel. Staffing at the County's 28 fire stations varies from one staff person supported by reserve firefighters to all reserve staffing. The TCFD adheres to staffing and response time goals of the National Fire Protection Association Standards (CPUC 2009). Fire protection services within the vicinity of the HCP Permit Area would most likely be provided by Ivanhoe Fire Station 8, Cutler-Orosi Fire Station 4, and Woodlake Fire Station 12 (TCFD 2008). Tulare County has a cooperative agreement with CAL FIRE should additional assistance be required.

City of Visalia

The City of Visalia’s Fire Department provides services to protect lives, property, and the environment through fire suppression, rescue, disaster preparedness, code enforcement, community education, medical care, and hazardous material mitigation. The Fire and Emergency Management Department consists of five divisions: Administration/Support Services, Emergency Services/Operations, Fire Prevention, Training, and Hazardous Materials Response. The City includes a Fire Department Administration, a north fire annex, Fire Station No. 51 (Fire Station No. 1), No. 52, No. 53, No. 54, No. 55 Training Center, and No. 56. Fire protection services within the vicinity of the HCP Permit Area would most likely be provided by Visalia Fire Station No. 51 (Fire Station No. 1).

Police Services

Tulare County

The Tulare County Sheriff’s Department has five divisions: Operations-Administrative Services, Operations-Patrol, Operations-Investigations, Detentions-Operations, and Detentions-Administration. Each division is commanded by one captain and is divided into units made up of lieutenants, sergeants, and civilian supervisors (Tulare County Sheriff’s Department 2012).

The headquarters patrol station for the Sheriff’s Department is located at 2404 West Burrel Avenue in Visalia. This location also houses the department’s business office, communications (non-emergency dispatch), mail jail, and records division. Operating through a decentralized patrol plan, the department has three substations located within the County. The substations are located in Pixley, Porterville, and Orosi. The department provides court security to all County courts, maintains all County jails, and provides law enforcement services to unincorporated areas in Tulare County.

Agriculture-related crime is addressed through two venues: the Tulare County Sheriff’s Department’s Agricultural Crimes Investigation Unit and the Office of the Tulare County District Attorney’s Agricultural Crime Technology Information and Operations Network (ACTION). ACTION comprises agencies from the eight counties in the San Joaquin Valley, including local district attorney’s offices, sheriff’s offices, agricultural crime units, and agricultural commissioners.

City of Visalia

The City’s police headquarters is located at 303 S. Johnson Street in Visalia and the City includes two police sub-stations—District 1 sub-station is located at 204 NW Third Avenue Visalia, California, and District 2 sub-station is located at 4100 S. County Center, Visalia, California.

Schools

There are five schools located within 1 mile of the HCP Permit Area. Charter Alternatives Academy (28050 Road 148, Visalia) is located 0.16 mile south of the Rector Substation. Village Pre-School (1414 N. McAuliff Street, Visalia) is located approximately 0.43 mile west. Mineral King Elementary School (3333 E. Kaweah Avenue, Visalia), and Golden West High School (1717 N. McAuliff Street, Visalia) are both located approximately 0.50 mile west. Woodlake Community Day School (36220 Millwood Drive, Woodlake) is located approximately 0.65 mile southwest.

Other Public Facilities*Daycare Facilities*

There are no registered or non-registered daycare/childcare facilities located within 1 mile of the HCP Permit Area.

Library

There are no libraries located within 1 mile of the HCP Permit Area.

Medical Facilities

There are no public medical facilities within 1 mile of the HCP Permit Area.

11.2 IMPACT ANALYSIS REGULATORY FRAMEWORK**Federal Regulations***Clean Water Act*

This law was enacted to restore and maintain the chemical, physical, and biological integrity of the nation's waters by regulating point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. This includes the creation of a system that requires states to establish discharge standards specific to water bodies (National Pollutant Discharge Elimination System), which regulates stormwater discharge from construction sites through the implementation of a Stormwater Pollution Prevention Plan (SWPPP).

State Regulations

The following State of California regulations pertaining to utilities would apply to the proposed action.

Protection of Underground Infrastructure

Section 4216 of the California Government Code requires that utility operators and other excavators must contact a regional notification center at least 2 working days prior to excavation of any subsurface installations. The notification center for Southern California is Underground Service Alert. Any utility provider seeking to begin an excavation project must call Underground Service Alert's toll-free hotline. In turn, Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the excavation. Representatives of the utilities are required to mark the specific location of their facilities within the work area prior to the start of excavation. The excavator is required to probe and expose the underground facilities by hand prior to using power equipment.

Assembly Bill 939

Assembly Bill 939, enacted in 1989 and known as the IWMA, required each city and/or county's Source Reduction and Recycling Element to reduce the amount of waste being disposed to landfills, with diversion goals of 50% by the year 2000. Tulare County had a diversion rate of 68% in 2010 (Akins, pers. comm. 2012).

Local Regulations

The following local regulations pertaining to utilities and public service systems would apply to the proposed action.

Tulare County General Plan

The Urban and Wildland Fire Hazards, Emergency Response, and Public Facilities and Services Elements of the Tulare County General Plan (County of Tulare 2010a) provide objectives, policies, and programs regarding utilities and public service systems, including the following:

Urban and Wildland Fire Hazards Element

Policy HS-6.1: The County shall ensure that all building permits in urban areas, as well as areas with potential wildland fires, are reviewed by the County Fire Chief.

Policy HS-6.3: The County shall consult the appropriate fire service district in areas identified as subject to high and extreme fire hazard, for particular regulations or design requirements prior to issuance of a building permit or approval of subdivisions.

Emergency Response Element

Goal HS-7: To provide effective emergency response to natural or human-made hazards and disasters.

Policy HS-7.1: The County shall coordinate emergency response with local, State, and Federal governmental agencies, community organizations, volunteer agencies, and other response partners during emergencies or disasters utilizing SEMS and NIMS.

Policy HS-7.3: The County shall continue to create, revise, and maintain emergency plan for the broad range of natural and human-made disasters and response activities that could foreseeably impact Tulare County. This shall include, but not be limited to, flooding, dam failure, extreme weather, evacuation/transportation mass care and shelter, and animal evacuation and sheltering. Emergency Planning projects shall be in line with the County's Strategic Plan and Emergency Operations Plan, and incorporate current guidance and initiatives from State and Federal Emergency Management Agencies.

Public Facilities and Services Element

Policy PFS-1.7: The County shall work with special districts, community service districts, public utility districts, mutual water companies, private water purveyors, sanitary districts, and sewer maintenance districts to provide adequate public facilities.

Policy PFS-1.12: The County shall seek to minimize vulnerability of public facilities to natural and man-made hazards and threats.

Goal PFS-5: To ensure the safe and efficient disposal and recycling of solid and hazardous waste generated in the County.

Policy PFS-5.6: The County shall require evidence that there is adequate capacity within the solid waste system for the processing, recycling, transmission, and disposal of solid waste prior to approving new development.

Policy PFS-6.1: The County shall work with telecommunication providers to ensure that all residents and businesses have access to telecommunications services, including broadband internet service. To maximize access to inexpensive telecommunication services, the County shall encourage marketplace competition from multiple service providers.

- Policy PFS-7.5:** The County shall strive to maintain fire department staffing and response time goals consistent with National Fire Protection Association standards.
- Policy PFS-7.6:** The County shall strive to provide sheriff and fire station facilities, equipment (engines and other apparatus), and staffing necessary to maintain the County’s service goals. The County shall continue to cooperate with mutual aid providers to provide coverage throughout the County.
- Policy PFS-7.9:** The County shall work with the Sheriff’s Department to achieve and maintain a response time of:
- Less than 10 minutes for 90% of the calls in the valley region; and
 - 15 minutes for 75% of the calls in the foothill and mountain regions.
- Policy PFS-7.10:** The County shall continue to promote cooperative law enforcement protection agreements with the Sheriff’s Department, California Highway Patrol, local city police, and adjacent County law enforcement agencies to provide added public protection on a year round basis.

Tulare County Construction and Demolition Debris Ordinance

The Tulare County Construction and Demolition Debris Ordinance (Ordinance Number 3321), adopted in 2006, establishes regulations for the recycling and diversion of construction and demolition debris within unincorporated areas in Tulare County. According to the ordinance, every applicant requesting a building or demolition permit for an applicable project must first submit a properly completed Construction and Demolition Debris Recycling and Reuse Plan to the Tulare County Resource Management Agency’s Permit Center. Within 30 days of project completion, the applicant must also submit a Construction and Demolition Debris Recycling and Reuse Plan Final Compliance report. Diversion requirements stipulate that 100% of inert solids and at least 50% by weight of the remaining construction and demolition debris resulting from the project must be diverted to an approved facility or by salvage (County of Tulare 2006).

City of Visalia General Plan

- Objective 1.1A:** Provide for long-range community water needs and protect water quality and quantity.
- Objective 1.2A:** Protect water resources vital to the health of the community’s residents and important.
- Objective 1.2B:** Preserve and enhance selected planning area waterways and adjacent corridors as valuable community resources which serve as plant and wildlife habitats, as flood control and irrigation components, and as connections between open space areas.

Objective PSCU-O-17: Manage solid waste such that City needs are met, opportunities for waste reduction and recycling are maximized, and high-quality service is provided.

Objective PSCU-O-18: Achieve and maintain the State’s solid waste management goals.

Policy PSCU-P-65: Continue to achieve the State waste reduction standard established for the Consolidated Waste Management Authority, and establish a more stringent local standard based on recent waste reduction trends.

11.3 ENVIRONMENTAL CONSEQUENCES

11.3.1 Methodology for Impact Analysis

For the No Action Alternative, changes to utilities systems and public services were estimated by comparing expected construction activity areas and staging areas using geographic information system (GIS) analysis with areas containing the utility lines and public facility services. It is assumed that construction-related impacts would be relatively short term in nature (approximately 1 year) and would not continue after the transmission line begins full operation, except during routine maintenance or in the event of an emergency. As such, underground utilities would not be impacted after construction activities are completed, and would only be impacted in the unlikely event of a major repair.

Identifying the Threshold of Significance

For the purposes of this Environmental Assessment (EA), an alternative would have a significant impact related to utilities and service systems if it would:

- Cause frequent or sustained outages or disruptions of public utilities and services
- Cause sustained interference with existing utility service or infrastructure.

11.3.2 No Action Alternative

Direct and Indirect Effects

Under the No Action Alternative, existing utilities and infrastructure would continue to be available for residents and businesses and not be potentially disrupted by construction activities, and the demand for public services in the resource study area would not be increased.

Under future conditions, reasonably foreseeable development within the resource study area would result in an increase in the service population, and additional demand for public utilities and services. Development of new or expanded infrastructure and facilities would occur

consistent with local plans and policies. To the extent that utilities and public service systems have not been sufficiently addressed at the plan level (including environmental review for the relevant general plans), individual projects would be subject to review under the California Environmental Quality Act (CEQA).

Infrastructure development activities under the No Action Alternative may result in temporary adverse effects on utilities and public service due to temporary interruptions in the availability of utility services and detours for public service vehicles for any temporary lane closures, but would not be disrupted upon construction completion.

The Big Creek Rebuild would result in construction activity within the North–South alignment (Big Creek Corridor) of the HCP Permit Area. This activity would result in temporary disruptions described above, and the need for demolition and construction debris disposal. Recycling/recovery practices for demolition materials, and the use of SCE-approved landfills would minimize effects to existing solid waste facilities.

Under the No Action Alternative, the Big Creek 1–Rector and the Big Creek 3–Rector 220 kV transmission lines in the western Big Creek Corridor would not be upgraded. This would have an indirect adverse effect on electrical service. Under existing conditions, during periods of heavy electrical demand, such as extremely cold or hot weather, the two existing transmission lines can become overloaded, causing power outages within the system. Any power outage of one of these two transmission lines during these heavy demand periods prevents the Rector Substation from distributing electrical power to many of SCE’s residential and commercial customers in the Rector Substation service area, which is located in Tulare and Kings Counties. Thus, such transmission line outages result in electrical outages or a “voltage collapse” within the Rector Substation service area. A “voltage collapse area” is defined by the North American Electric Reliability Corporation (NERC)/Western Electricity Coordinating Council (WECC) Standard TPL-003 2013 as a geographic area where power is lost for an extended period of time. In the event of a voltage collapse, SCE may be unable to serve up to 50,000 of its residential and commercial customers that rely on the Rector Substation for electrical power.

Determination

Under the No Action Alternative, the proposed HCP, including Covered Activities, would not be implemented and no utilities and public services related to construction and operation of the Covered Activities would be required. Future development projects that anticipate growth and activities may require additional utilities, infrastructure, and need for public services, which would be analyzed and reviewed under the County or City’s discretionary and environmental review process. The No Action Alternative would have an indirect effect on SCE residential and commercial customers within the Cities of Tulare, Visalia, Farmersville, Exeter, and Woodlake,

as well as the Tulare County portion of the Electrical Needs Area as existing limitations in the transmission system would not be improved, exposing residents and business owners in the area to potential outages. Outages within the Rector Substation service area would continue until the transmission line experiencing the outage is repaired or heavy electrical demand is substantially reduced. Outages within the Rector Substation service area would continue until the transmission line experiencing the outage is repaired or heavy electrical demand is substantially reduced. Because the existing lines do not meet the current electrical demand during periods of high use and electrical demand is expected to increase in future in the Rector Substation service area, this overload condition is also expected to increase. The No Action Alternative would not meet the purpose and need of the action, may cause a conflict with land use plans and policies, and may inhibit future land uses of the HCP Permit Area.

11.3.3 Proposed Action Alternative

Direct and Indirect Effects

Impact PSU-1: Cause frequent or sustained outages or disruptions of affect public utilities and services.

The proposed HCP and Covered Activities would not create a permanent increase in demand for water. Water for construction activities, including water for dust suppression, and potable water for construction crews, would be supplied by transporting water to the HCP Permit Area. The water would come from existing suppliers, such as Cal Water. The demand would be temporary and minimal, not requiring additional infrastructure or entitlements.

The proposed action would not increase the need for sewer facilities. Dust suppression water would be absorbed into the ground, while construction restroom facilities would be portable. Similarly, additional stormwater facilities would not be required. See Chapter 6, Hydrology, Water Quality, and Drainage, for a discussion of temporary and permanent changes in surface runoff.

The proposed action would not require additional electrical, natural gas, or telephone service. By addressing an existing need in the transmission system, the proposed action would have a direct beneficial impact upon electrical service in the County (see Chapter 1, Purpose and Need) by improving system reliability.

As the proposed action does not include demolition activities, the impact to solid waste facilities would be minimal. There is the potential for some fill export. This material would be disposed of at an SCE-approved site, minimizing the effects to existing solid waste facilities.

The proposed action includes construction activities in and near wildfire hazard areas. This effect is addressed in Chapter 16, Public Health Hazards. The project would not, however, require a substantial permanent increase in fire service for the resource study area.

The proposed action includes the temporary storage of equipment and supplies, which may be subject to theft and vandalism. The effect on police calls is expected to be minimal, and would not require an expansion in existing service or construction of additional facilities.

The proposed action would not generate additional demand for schools, daycare, libraries, or other public services. The construction crews would be commuting workers (experienced crews from out of the area), and additional local workers. There would not be an increase in the service population.

Determination

The proposed action would not cause frequent or sustained outages or disruptions to public utilities or services, and would not result in a direct or indirect adverse effect.

Impact PSU-2: Cause sustained interference with existing utility service or infrastructure.

The proposed action would not affect existing utilities. As discussed above, the proposed action would provide a beneficial effect to electrical service.

Construction activities associated with the proposed action could temporarily affect transportation (local roadways) and property access in the resource study area (the HCP Permit Area and adjoining properties). This could temporarily interfere with emergency response (fire and police calls) and could result in a direct, temporary adverse effect. To avoid temporary adverse effects related to emergency response, SCE shall implement Environmental Commitment (EC) TRA-2.

Environmental Commitments

EC TRA-1: SCE shall prepare and implement a Traffic Management Plan subject to approval of Caltrans and/or the applicable local agency (including, but not limited to the County of Tulare and City of Visalia). The approved Traffic Management Plan and documentation of agency approvals shall be submitted to the CPUC prior to the commencement of construction activities. At a minimum, the plan shall:

- Include a discussion of work hours, haul routes, work area delineation, traffic control and flagging;
- Identify all access and parking restriction and signage requirements;
- Require workers to park personal vehicles at the approved staging area and take only necessary project vehicles to the work sites;
- Lay out plans for notifications and a process for communication with affected residents and landowners prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage

of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which road/lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints;

- Include plans to coordinate all construction activities with emergency service providers in the area, including police, fire, and the County Office of Emergency Services. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times; and
- Identify all roadway locations where special construction techniques (e.g., night construction) would be used to minimize impacts to traffic flow.

(This measure corresponds to Mitigation Measure 4.14-1b (CPUC 2010).)

Determination

It is not expected that the proposed action would interfere with school operations, daycare, libraries, or other public facilities. Effects related to fire and police emergency response would not be adverse with implementation of EC TRA-1.

Cumulative Effects of the Proposed Action

Impacts PSU-1 and PSU-2

The proposed action would add the implementation of the HCP and Covered Activities to the cumulative effects described in Section 11.3.2. Future demand associated with development would create the need for additional infrastructure and services. However, as the project would not create additional permanent demand for utilities and services, the proposed action would not result in a cumulative effect.

The Big Creek Rebuild could create additional demand for solid waste disposal, as it would require the removal and disposal of lattice tower structures and associated hardware (i.e., insulators, vibration dampeners, suspension clamps, ground-wire clamps, shackles, links, nuts, bolts, washers, cotter pins, insulator weights, and bond wires), as well as the transmission line primary conductors, ground wire, and footings. The solid waste generated from removal of the lattice tower structures and associated hardware would be separated by construction workers at the laydown areas into salvageable, recyclable, and non-reusable items. Items that can be recycled and salvaged (including excess conductor wire, steel from towers, and hardware) would be separated and transported to the designated material staging areas. The disposal of these wastes would be taken to nearby landfills and is not expected to exceed the landfill capacity since the transmission line project would not be

a generator of waste. These proposed practices, and the lack of significant waste generated by the proposed action, would not result in a significant cumulative effect.

The proposed action, with appropriate ECs for emergency response impacts, would not result in an adverse effect on existing services. Any interference with existing services created by future development would not overlap the construction phase of the proposed transmission line which is only 1 year, and would be addressed by future project and environmental review.

Determination

The Service evaluated the past and present effects on utilities and public service systems as summarized in Sections 11.1 and 11.2. Then the Service evaluated effects of the reasonably foreseeable other projects, as summarized in Section 11.3 and Chapter 3. Finally, the Service added the incremental effects of the proposed action, as described in Section 11.3 to those other effects. The Service concludes that the small incremental effects of the proposed permit action and HCP, when added to the effects of the past, present, and reasonably foreseeable future projects on the utilities and public service systems in the resource study area would have a temporary, direct effect upon emergency response (fire and police). Proper coordination regarding road closures and property access would avoid this effect.

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CHAPTER 12.0 TRAFFIC AND TRANSPORTATION

This chapter describes the existing conditions pertaining to traffic and transportation and discusses applicable federal, state, and regional regulations. This chapter also evaluates the potential environmental consequences that could result from each alternative discussed in Chapter 2.

Public and agency comments received during early public scoping (CPUC 2009) included concerns regarding impacts related to compatibility of construction traffic with farm equipment, temporary disruptions of traffic, California Department of Transportation (Caltrans) jurisdiction over state highways, and the effect of proposed roadway improvements, including the pavement overlay of State Route 245 (SR-245) and a future interchange at SR-198 and Road 148.

Information in this chapter is based on construction worker truck trip and construction material trip estimates provided by Southern California Edison (SCE).

12.1 AFFECTED ENVIRONMENT

This section describes the existing setting in the resource study area, including the regulatory setting, and identifies the resources that could be affected by the proposed action. For the purposes of this analysis, the resource study area for direct impacts comprises the HCP Permit Area plus a 1-mile buffer. This area was selected to address impacts within the proposed right-of-way (ROW) and access to adjacent properties. For indirect effects, the resource study area extends in a 3-mile radius from the HCP Permit Area. This area was selected to the nearest important regional roadways (highways and major arterials) in the vicinity of both the N-S and E-W alignments.

The proposed transmission line would be located in northwestern Tulare County (County), California, near the cities of Visalia, Farmersville, and Exeter. With the exception of the City of Visalia, the resource study area is primarily rural, low-density, and agricultural. Due to the low-density nature of development in the County, the dominant mode of transportation is the private automobile. The transportation system in the area is composed of an interconnected network of state, County, and city roads; local transit systems; and a rail ROW. The transportation system in the resource study area is described below.

Several state and local roadways provide regional and local access to the resource study area, each of which would be used to transport construction materials, equipment, and workers to and throughout the resource study area. The project corridors and surrounding roadway network are illustrated in Figure 12-1, Circulation Network. Descriptions of the regional and local roadway network in the resource study area are provided below.

Regional Roadways

Regional access to the resource study area is provided by SR-99, SR-198, SR-65, SR-201, SR-216, and SR-245.

SR-99 is a north–south state highway that extends almost the entire length of the Central Valley. SR-99 is an alternate to Interstate 5 (I-5) through the more populated portions of the valley. SR-99 is the second most traveled roadway in the County (County of Tulare 2010). SR-99 in the vicinity of the resource study area is a controlled access freeway. SR-99 would not be crossed by the proposed alignment. Traffic volumes along SR-99 in the area of its junction with SR-198 have an annual average daily traffic (ADT) level of 56,000 vehicles per day, and it is estimated that 28% of the trips are trucks (Caltrans 2012; County of Tulare 2010).

SR-198 is an east–west state highway that connects the California Central Coast to the mid-Central Valley at Visalia. The road begins at U.S. Route 101 south of King City and has a junction with I-5 in Fresno County. From I-5 to just east of Visalia, SR-198 is a controlled-access freeway with four lanes. It has an interchange with SR-99 in Visalia and continues east of Visalia as a two-lane highway where it ends at Sequoia National Park. Traffic volumes along SR-198 in the resource study area (east of Lovers Lane) have an annual ADT level of 36,000 vehicles per day (Caltrans 2012). The proposed alignment would cross SR-198.

SR-65 is a north–south state highway composed of two segments connecting Bakersfield to Exeter (south of the resource study area) and Roseville to Olivehurst. A large section of SR-65 that is planned to link the two segments has not yet been constructed. Traffic volumes along SR-65 in the resource study area (south of SR-198) have an annual ADT of 10,600 vehicles per day (Caltrans 2012). The proposed alignment would not cross SR-65.

SR-201 is an east–west state highway that connects SR-99 in Kingsburg, Fresno County with SR-245 (Millwood Drive) in the resource study area. Traffic volumes along SR-201 in the resource study area (junction at SR-245) have an annual ADT level of 1,500 vehicles per day (Caltrans 2012). The proposed alignment would not cross SR-201.

SR-216 is an east–west two-lane state highway which stretches from Visalia to Woodlake in Tulare County. The proposed alignment would cross SR-216. Traffic volumes along SR-216 in the resource study area (east of Lovers Lane) have an annual ADT level of 9,000 vehicles per day (Caltrans 2012).

SR-245 is a north–south two-lane state highway that runs from near Exeter to near Kings Canyon National Park, connecting SR-198 in Tulare County to SR-180 in Fresno County. It runs through the City of Woodlake and the small unincorporated communities of Elderwood, Badger, and Pinehurst.

The proposed alignment would cross SR-245. Traffic volumes along SR-245 in the resource study area (at the junction of SR-198) have an annual ADT level of 3,050 vehicles per day (Caltrans 2012).

Local Roadways

The local roadways that border, cross, or may be used to access the resource study area are described below. Some of the roads would be affected during line-stringing activities over the roads, while others would be used for access throughout the construction phase of the project. Many of the local roads experience relatively low traffic volumes. Tulare County is responsible for maintaining an extensive network of low to moderate volume farm-to-market roadways in sparsely settled areas to service its large agricultural industry. Large trucks and vanpools are the primary means of transporting such goods and labor (County of Tulare 2010).

Rural road conditions are deteriorating at an accelerated rate. These county roads are increasingly used by the agricultural and dairy industries to haul their product to market. Large potholes, alligator cracking, and deterioration of the asphalt exist on county roads (County of Tulare 2010).

The proposed alignment would cross a number of public and private roads. North of the Rector Substation, the proposed alignment would cross East Walnut Avenue/Avenue 288, a two-lane County roadway with no shoulders. The proposed alignment would also cross Avenues 313, 320, 328, 344, 352, 356, 360, 364, all two-lane County roadways with no shoulders. Once the alignment turns east, it would cross Roads 156, 164, 172, 176, and 368, all two-lane County roadways with no shoulders. The N–S alignment runs parallel to Road 148 for much of its length.

Public Transit

Tulare County Area Transit (TCaT) provides fixed-route transit services between large and small communities throughout the greater Tulare County Area. TCaT Route 30 operates within the resource study area. The proposed alignment would not cross any roadways used by the Route 30 bus. The proposed alignment would cross the Route 30 line at SR-216 (Ivanhoe Drive).

Bicycle and Equestrian Transportation

Bicycle facilities include bike paths, bike lanes, and bike routes. Bike paths are paved trails that are separated from the roadways (Class 1). Bike lanes are lanes on roadways that are designated for use by bicycles by striping, pavement legends, and signs (Class 2). Bike routes are roadways that are designated for bicycle use, but do not have additional width for bicycle lanes (Class 3) (TCAG 2010a). The proposed alignment would not cross any existing designated bicycle facilities. The equestrian trails are located on farms, ranches, in the foothills, and in parks and forests.

Airports

There are seven public use airports in Tulare County. These include five publicly owned and operated facilities and two privately owned open to public use (County of Tulare 2010). The largest general aviation airport in the resource study area is Visalia Municipal Airport, located approximately 10 miles to the west of Rector Substation near the junction of SR-99 and SR-198.

Rail Service

The Union Pacific Railroad (UPRR), the Burlington Northern and Santa Fe Railroad (BNSFRR) and the San Joaquin Valley Railroad all provide freight service in Tulare County. Passenger rail service is provided by AMTRAK (San Joaquin Service). The proposed alignment would cross the UPRR line and the BNSFRR line.

12.2 IMPACT ANALYSIS REGULATORY FRAMEWORK

Federal Regulations

The following federal regulations pertaining to traffic and transportation would apply to the proposed action.

State Regulations

State jurisdiction of the roadway network includes permitting and regulation of the use of state roads.

Caltrans

Construction work that would occur within or over a public roadway would require the issuance of encroachment permits by the local Caltrans district prior to commencing work in the public ROW. The resource study area is within District 6, headquartered in Fresno. Caltrans' construction practices require temporary traffic control planning for any time the normal function of a roadway is suspended. In addition, Caltrans requires that permits be obtained for transportation of oversized loads and transportation of certain materials, and for construction-related traffic disturbances. Caltrans regulations would apply to the transportation of oversized loads associated with the construction of the proposed transmission line.

California Public Utilities Commission

General Order No. 26-D allows the California Public Utilities Commission (CPUC) to govern clearances above railroads with regard to side and overhead structures. Therefore, any portion of the proposed transmission line that would cross a railroad corridor would require review by the CPUC.

Local Regulations

Local jurisdiction over the roadway network includes implementation of state permitting, policies, and regulations, as well as management and regulation of local roads. Likewise, County and city (City of Visalia and City of Farmersville) regulations related to ROW encroachment and oversized loads would apply to the construction of the proposed transmission line.

Tulare County Association of Governments

The Tulare County Association of Governments (TCAG) is the regional transportation planning agency for Tulare County and the metropolitan planning organization for the Visalia area. TCAG prepared the *2011 Regional Transportation Plan*, a 25-year plan for regional transportation planning and funding (TCAG 2010b).

Tulare County General Plan Transportation & Circulation Element

The County's Transportation and Circulation Element, adopted in 2012, identifies the transportation network necessary to support the land uses in the *Tulare County General Plan 2030 Update*. Policy TC-1.1, Provision of an Adequate Public Road Network, states “[t]he County shall establish and maintain a public road network comprised of the major facilities illustrated on the Tulare County Road Systems to accommodate projected growth in traffic volume” (Tulare County 2012).

City of Visalia General Plan Circulation Element

The Circulation Element was updated in 2001 to ensure that the City's circulation system and implementation policies and programs would accommodate the growth envisioned in the 1991 Land Use Element (City of Visalia 2001). The Circulation Element identifies the goals, policies, and a transportation master plan to implement the General Plan. Within the resource study area, several streets (or segments of those streets) are within Visalia's jurisdiction, including Ivanhoe Drive, Road 148, Avenue 320, and E. Murray Avenue.

12.3 ENVIRONMENTAL CONSEQUENCES

12.3.1 Methodology for Impact Analysis

The project setting was developed by reviewing available information on transportation facilities in the resource study area, including geographic information system (GIS) maps of area roadways that would intersect the proposed ROW. Information on construction worker truck trip, construction material trip estimates, and the construction schedule were provided by SCE.

For the purposes of this Environmental Assessment (EA), the Service adopted the significance criteria from the CEQA Environmental Checklist (CPUC 2009, 2010). An alternative would have a significant impact related to traffic and transportation if it would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)
- Exceed, either individually or cumulatively, a level of service standard established by the County for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in the location that results in substantial safety risks.

12.3.2 No Action Alternative

Direct and Indirect Effects

Traffic volumes (the amount of vehicle trips on a given roadway) are a function of past and present development. Reasonably foreseeable future development will continue to add vehicle trips to the roadway network. Local and regional transportation plans, described in Section 12.2.2, program the infrastructure necessary to manage and accommodate this growth, while promoting alternative transportation modes (transit, bicycle, pedestrian). Regionally, roadways are anticipated to become more congested, triggering the need for additional improvements and transportation management.

Within the resource study area, numerous improvement projects are identified in the 25-year transportation plan that would improve circulation in the long-term, but temporarily disrupt traffic patterns during construction (TCAG 2010b). Several of these projects are within or adjacent to the HCP Permit Area. These projects include three widening projects—E. Walnut Avenue, Road 148, and SR-216—and a proposed interchange at SR-198 and Road 148.

Determination

Under the No Action Alternative, changes to the transportation system in the resource study area would not be adverse.

12.3.3 Proposed Action Alternative

Direct and Indirect Effects

The proposed action, including Covered Activities, has the potential to affect transportation within the resource study area.

Impact TRA-1: Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.

The proposed action would generate traffic related to the following activities: movement of construction equipment; movement of construction materials, including tower components; import of fill for roadway construction; and commuting of construction crews.

Daily vehicle trips would be generated associated with the arrival and departure of construction workers. It is estimated that several construction crews would operate concurrently each day, with a peak of up to 50 workers associated with the construction of the proposed Cross Valley Transmission Line. Assuming a trip generation rate of 1.5 round trips per day per worker, the 50 employees would not be anticipated to exceed 75 auto round trips (150 one-way trips) from the construction workers traveling to and from the work sites each day. Peak trips (a.m. commute) would not exceed 50 trips and would be spread over the roadway network in the resource study area. The location of the workforce has not been identified, but it is reasonable to assume that many of the workers would be based in Visalia, the nearest urban area. Construction workers would park at the staging areas and at the specific project sites. The number of workers at each staging area would vary throughout the construction schedule.

Accounting for the delivery of construction components and material excavation, the total number of off-site construction truck trips would be up to 32 round trips (64 one-way trips) per work day over a 40-day period. Material staging areas are proposed that would include a field office, a reporting area for workers, storage for materials and equipment, and a parking area for project vehicles.

The roadway construction would require import of fill, estimated at 4,000 cubic yards. Assuming 20 cubic yards per truck, this would generate 200 round trips. Some rock or vegetation may also be exported as part of the roadway construction (but would be less than the import volumes). Roadway construction would be completed within a 30-day period, along 8 miles of roadway. Roadway construction is in the E–W alignment, and not in heavily inhabited or travelled areas.

Determination

Traffic volumes from workers are not significant when considered in the context of the overall area and the remoteness of the job sites from high volume intersections. As for construction components and material import/export, the volumes are low enough, and spread out over time and location, that the effect on roadway segment and intersection operation would not be significant. However, localized impacts at the construction sites, or at access points to staging areas, could result in temporary disruptions. These effects would be minimized by implementation of the Traffic Management Plan described in Impact TRA-2, below. The temporary increase in traffic volumes associated with construction activities would not be a significant adverse impact.

Impact TRA-2: Exceed, either individually or cumulatively, a level of service standard established by the County for designated roads or highways.

Temporary disruptions of traffic may occur during construction. This would be caused by construction of new access roads and improvement/repair of existing access roads that adjoin public roads or by the movement of large construction equipment and material that would disrupt traffic on a public road. On smaller roads that also handle large agricultural equipment and vehicles, this conflict may be more pronounced. Construction may also limit access to property by blocking private roads. Refer to Figure 2-3, New Access Roads, for the location of new access roads. The installation of temporary guard structures and the tensioning of lines over public roads may also disrupt traffic. Although these activities are temporary, they have the potential to adversely affect traffic operations.

The proposed action would include the construction of approximately 8 miles of new access roads. These roads would be private SCE roads. The access roads would be unpaved, with a 16-foot-wide drivable surface and 2-foot shoulders on each side. All new access roads would be located in the E–W alignment, with the majority east of the Friant–Kern Canal. The roadways would create, or use existing connections, to Roads 156, 164, 172, 192, 204, Millwood Drive, and Piedra Drive.

Ongoing operations would include regular inspections of the transmission facilities. Inspection traffic would be limited to pickup trucks. Aerial inspection would also be used. Heavier vehicles may be used for maintenance. Tree trimming would typically occur once every 2 years. Facilities maintenance would be on an as-needed basis. It can be anticipated that some minor maintenance on some portion of the two alignments would be needed at least annually.

Environmental Commitments (ECs)

EC TRA-1: SCE shall prepare and implement a Traffic Management Plan subject to approval of Caltrans and/or the applicable local governments. The approved Traffic Management Plan and documentation of agency approvals, including Caltrans and local encroachment permits, shall be submitted to the CPUC prior to the commencement of construction activities. At a minimum, the plan shall:

- Include a discussion of work hours, haul routes, work area delineation, traffic control and flagging.
- Identify all access and parking restriction and signage requirements.
- Require workers to park personal vehicles at the approved staging area and take only necessary project vehicles to the work sites.

- Include plans to coordinate all construction activities with emergency service providers in the area, including police, fire, and the County Office of Emergency Services. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times.
- Identify all roadway locations where special construction techniques (e.g., night construction) would be used to minimize impacts to traffic flow.

(This measure corresponds to Mitigation Measure 4.14-1b (CPUC 2010).)

Determination

Implementation of EC TRA-1 would minimize the effects of construction activity on public and private roads. The private access roads would be used infrequently. The connections to public roads would be submitted to the appropriate local agency for review (in most cases, the County of Tulare). Maintenance on new and existing access roads, and travel to these roads via public streets, would be infrequent and would not significantly disrupt traffic. Operational-related traffic impacts would not be adverse.

Impact TRA-3: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in the location that results in substantial safety risks.

Helicopters would be used during construction of the proposed transmission line to install towers. However, this use would be intermittent and would not substantially change air traffic patterns in the area. The proposed action would not otherwise increase air traffic levels nor change the location of flight tracks. The proposed action may, however, affect the safety of aerial applicators and frost control aircraft, which do not follow normal flight tracks. This impact is addressed in Chapter 16, Public Health Hazards.

Determination

Implementation of the Covered Activities would not result in a substantial change in air traffic patterns. The adverse effect would not be significant.

Cumulative Effects of the Proposed Action

As described under the proposed action, effects to the transportation system are primarily temporary in nature. Long-term operational effects are not significant.

An overlap of the construction phase of the proposed action with other major construction projects or maintenance projects has the potential to create cumulative effects. Several future roadway improvement projects are identified within the resource study area. The list below

identifies the roadway and the nature of the project. All of the projects below are located near the N–S alignment. The E–W alignment, where most of the proposed action access road construction would occur, would not be affected by reasonably foreseeable future roadway projects.

- E. Walnut Avenue, widening project
- Road 148, widening project
- SR-216, widening project
- SR-198, interchange at Road 148.

The future roadway projects are likely to cause disruptions to local traffic. However, these projects are not likely to occur before the construction phase of the proposed action is completed (anticipated to be 1 year or less). Should one or more of these projects overlap, the cumulative construction effects would be minimized, as relatively little of the proposed action would occur within these ROWs. The construction of temporary guard structures and the tensioning of lines may require some use of these ROWs, as would the use of these roadways to transport construction materials. These effects would be reduced through proper coordination of traffic management plans, as required under EC TRA-2.

Determination

The U.S. Fish and Wildlife Service (Service) evaluated the past and present effects on transportation/traffic as summarized in Section 12.2. Then the Service evaluated effects of the reasonably foreseeable other projects, as summarized in Section 12.3 and Chapter 3. Finally, we added the incremental effects of the proposed action, as described in Section 12.3, to those other effects. We conclude that the small incremental effects of the proposed permit action and HCP, when added to the effects of the past, present, and reasonably foreseeable future projects on the transportation and traffic in the resource study area, do not meet the identified thresholds of significance (TRA-1 through TRA-4) and are not considered significant.

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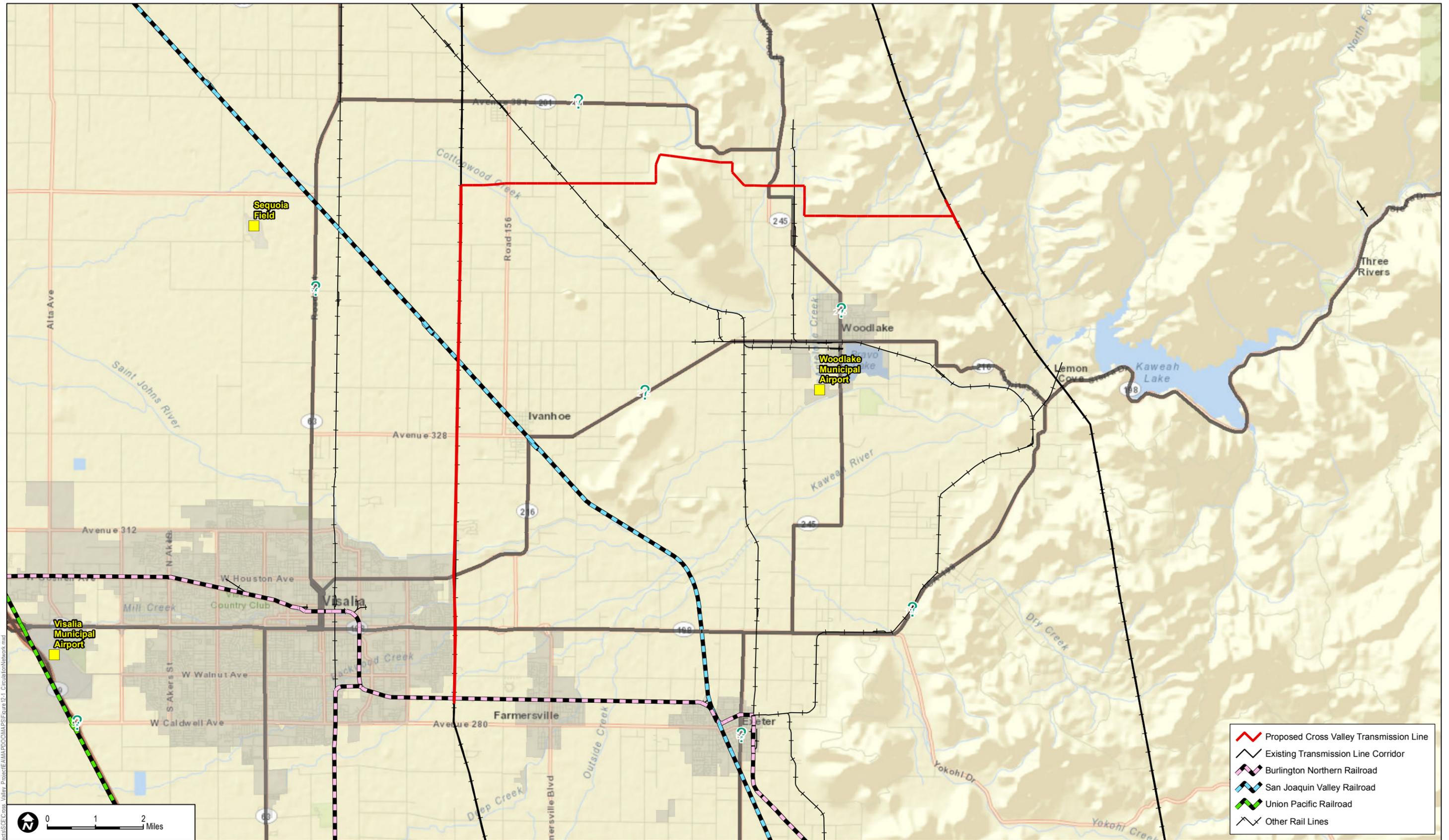
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SOURCE: SCE 2013, Tulare County, ESRI Online

FIGURE 12-1
Circulation Network

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