

D.20 Wildland Fire

This section describes the affected environment for Wildland Fire in Section D.20.1 and presents the relevant regulations and standards in Section D.20.2. Sections D.20.3 through D.20.5 describe the impacts of the Proposed Project and the alternatives. Section D.20.6 presents the mitigation measures and mitigation monitoring requirements, and D.20.7 lists references cited.

Development in and adjacent to fire-prone landscapes creates a major public safety risk throughout the Southwest and no more so than in southern California. Any fire in wildlands can become a conflagration during California's long, hot, dry fire season, when climatic conditions can enhance the potential for fires to ignite and spread. Primary concerns with regard to the risk of wildland fire include weather conditions (temperature, humidity, and wind), the presence and condition of fuels (vegetation), and potential fire ignition sources. The area between El Casco and Devers Substations is an area of high wind potential, as evidenced by the numerous wind turbine arrays located in the San Geronio Pass area east of Banning, and high winds can fan and accelerate any wildfire ignitions. However, weather is beyond human control. In contrast, fuel and ignition sources can be addressed through vegetation management, fire prevention practices, planning, and education.

During transmission line construction, certain work activities have the potential to create situations that could ignite fires. Examples include ignition from sparks created by welding or metal objects striking stones landing in dry vegetation, and vehicles parking in dry grass such that hot parts of the undercarriage could ignite the vegetation. After construction is completed and the transmission line is operating, fire ignition concerns center on potential equipment failures or routine operation and maintenance activities that could ignite flammable material.

The presence of a transmission line can hinder initial attack and containment in the event of a fire in the vicinity of the line. The presence of structures and conductors can pose risks to firefighters, both on the ground and in the air. Where overhead power lines are present, aerial and ground attacks are restricted. Aerial operations are complicated by the risk of aircraft and/or water buckets colliding with structures or conductors during smoky, reduced-visibility conditions. Conditions are especially hazardous when transmission lines are placed on ridge tops, reducing the proximity of fire retardant and water drop deliveries that aerial firefighting crews can achieve safely. For these reasons, pilots are kept apprised of the location of transmission lines. Firefighters on the ground can be put at risk if charged particles in heavy smoke create a short circuit or arc between an energized line and the earth, a person, or firefighting equipment. For this reason, firefighting protocols require crews to maintain certain distances from energized lines. Fire managers coordinate with utilities on shutting down lines as needed. Access roads to structures can also provide fire crews access to the area and be used as potential fire breaks.

Wildfires can affect transmission line integrity and transmission system reliability if they damage equipment or require line de-energization. However, the height of vegetation is managed beneath high-voltage transmission lines so as to reduce fuel load and ensure that lines do not make contact with vegetation. If ignited, the vegetative fuel in a managed ROW would burn quickly and relatively low to the ground and is unlikely to generate sufficient heat or flames to damage lines, which are high above the ground, or structures, which are steel and have a mandatory cleared area around them. During wildfire events, lines may be de-energized as a safety precaution, temporarily taking the line out of service and requiring other parts of the power grid to pick up the load. A widespread fire could cause multiple lines to be de-energized, resulting in power shortages.

Electric lines have been implicated in igniting fires. Electrical arcing from power lines can represent a fire ignition hazard. This phenomenon is more prevalent for lower voltage distribution lines, which typically

are on wooden pole structures and in closer proximity to trees and other vegetation. Fire protection agency statistics show that more fires start from distribution lines rather than from transmission lines (CAL FIRE, 2008). Downed distribution lines that land on non-conducting surfaces may remain energized, creating a fire and life-safety hazard (Marino, 2014).

Fire hazards posed by high-voltage transmission lines are greatly reduced by the use of taller support structures made of steel and placed in wider ROWs, and by managing vegetation under the lines where there is a risk of conductors coming into contact with trees. The risk of a fire igniting due to a conductor falling from an overhead line is minimal due to additional system protection features designed to safeguard the public and line equipment. These systems consist of transmission line relays and circuit breakers that rapidly detect faults and cut-off power to avoid shock and fire hazards. This equipment is typically set to operate in 2 to 3 cycles, representing a time interval range from 2/60 of a second to 3/60 of a second. Unlike distribution lines, transmission lines do not have transformers or other electrical equipment mounted on poles. These types of distribution equipment, including the wooden cross arms supporting distribution lines, may fail, resulting in sparks or arcing that could ignite a fire.

While it is rare that a high-voltage transmission line ignites a fire directly, there are situations where lines have been associated with fires. For example, in August 2013, a “bouquet” of metallic balloons became entangled in a 500 kV transmission line in Tehama County (Wolff, 2013). The blowing balloons and string created a circuit between two of the transmission line conductors, igniting the balloons’ nylon string, which fell into nearby grass and starting the 11,429-acre Deer Fire (Wolff, 2013).

SCE has identified two fire incidents in the WOD project area that were related to, but not caused directly by, its facilities. In 2009, an 85-acre brush fire near the intersection of Moreno Valley Freeway (Highway 60) and Jack Rabbit Trail is believed to have started at the base of a steel H-frame structure. It is speculated that a bird may have faulted the line, possibly starting the fire. No structures were damaged or injuries reported. In 2012, a 50-acre wildfire (the Bluff 2 Fire) near Bluff Road and Dillon Road in Banning resulted from vandals cutting down copper conductor in several spans on a 12 kV distribution circuit. Beyond damage to SCE facilities, no structures were damaged or injuries reported (SCE, 2014).

D.20.1 Environmental Setting / Affected Environment

D.20.1.1 Regional Setting and Approach to Data Collection

The ROW for the Proposed Project passes through urban, suburban, and rural landscapes. The wildland/urban interface is of particular concern for wildfire, where there can be an increased risk of ignitions and where fires can pose an increased risk to structures. The project ROW contains existing 220 kV power lines. (A section of the existing ROW on Morongo Tribal lands is proposed to be abandoned and replaced by ROW nearer Interstate 10, and an existing wood-pole mounted line would be removed and the line underbuilt on the new structures in the relocated ROW.) Overall, the Proposed Project would replace single-circuit 200 kV transmission lines with double-circuit lines of similar voltage. The structures supporting the new lines would be taller than the existing structures.

Fire management and protection responsibility on and near the ROW is allotted to different jurisdictions. In the project area there are three levels of jurisdiction: Federal/Tribal (on Federal and tribal land), State (on State and most unincorporated county land), and local (on incorporated [municipal] land and some unincorporated county land). While individual fire agencies have primary responsibility for specific geographic areas, under interagency cooperative and mutual aid agreements, fire agencies throughout the region aid each other as needed. Typically, when a wildland fire is reported, the nearest available fire-fighting units are dispatched, as it is not always immediately clear which wildland parcels are involved and which agency has jurisdiction.

Wildland fire suppression operations are complex and expensive. Fire suppression in the wildland-urban interface typically involves a multi-agency firefighting response that involves hundreds of firefighters participating in coordinated air and ground operations. During the fire season, the availability and response time for these resources may vary according to the number of other emergencies in the area and the availability of volunteer firefighters.

Helicopters and airplanes are often the fastest resources available to reach a wildfire. Almost anywhere in California, a firefighting aircraft can reach a wildfire within 20 minutes, depending on wind conditions that can ground aircraft if too strong (CAL FIRE, 2012). It can take an hour or more for fire engines to reach a wildland fire, especially in remote areas. Aerial attacks principally work in conjunction with firefighters on the ground. Aerial firefighting attacks are effective during initial attacks for extinguishing small fires and protecting homes. On large fires, aerial attacks are used for specific tactical suppression objectives such as reinforcing an established fire line. Identifying and extinguishing spot fires outside the fire line is another critical job done by aircraft.

In San Bernardino County, fire protection and suppression on all of the lands through which the Proposed Project passes are the responsibility of the respective incorporated cities, with the exception of a small unincorporated area in the vicinity of Reche Canyon Road and Prado Lane, between Colton and Loma Linda, which is a State responsibility area. Much of the area is urbanized, but wildland conditions are found near the county line, in south Loma Linda and south Redlands, and on unincorporated land.

In Riverside County, wildland conditions occur on unincorporated lands on the south side of San Timoteo Canyon. The area from the county line south to Calimesa and Beaumont is a State responsibility area for fire protection. East of San Timoteo Canyon Road, the alignment enters Beaumont, Calimesa, and Banning, where fire response and management are a local responsibility. East of Banning, the route passes through a checkerboard of tribal, BLM, and unincorporated Riverside County lands, which are areas of tribal, Federal, and State responsibility, respectively.

Information has been developed by CAL FIRE for both fire protection responsibilities by jurisdiction and for fire hazard severity zone designations. CAL FIRE maps indicate where fire suppression is a local, state, or federal responsibility. The agency also maintains maps that depict the estimated fire hazard severity (CAL FIRE 2007a, 2007b, 2008b, 2009). Responsibility information for the study area is displayed in Figure D.20-1. Fire hazard severity zone information is displayed in Figure D.20-2. The statewide model used by CAL FIRE to determine hazard severity is based on vegetation, topography, weather, crown fire potential, ember production and movement, and, based on past history, the likelihood of an area burning over a 30- to 50-year period.

Recent fires that occurred within 0.25 miles or less of the ROW include the Indian (2005), Locust (2003), Painted Hills (2005), San Tim (2011), San Timoteo (2005), and Woodhouse (2005) fires. While the CAL FIRE model estimates the likelihood of an area burning over a 30- to 50-year period, the actual potential for a fire can vary based on changes in the vicinity. The likely fire return interval within or adjacent to the ROW in Segments 2, 3, and part of 4 (described below) is once every 2 to 3 years, based on six fires having occurred in the past 10 years. The native vegetation mosaic in these segments has been severely altered and converted from chaparral and oak woodlands to perennial grasses. This, in conjunction with the fire history of the wildland segments, suggests the likely frequency of a fire burning through or adjacent to the ROW in these segments is fairly high. Grass fires have a very rapid rate of spread, produce large volumes of embers carried by the wind (that can ignite structures and cause downwind spot fires), and require effective ground and aerial initial attack to suppress. Beyond soot deposition, which could cause electric arcing, these fires pose little threat to the transmission structures and conductors.

Analogous to flood zone maps, the fire hazard severity zone maps indicate the level of hazard. In the case of the FHSZ maps, the maps identify the likelihood that an area will burn over a 30- to 50-year period without considering modifications that may occur, such as through fuel reduction efforts or other changes in the fuel regime (CAL FIRE, 2007c). Risk is not indicated by the maps. Risk is the potential damage that can be done by a fire, based on existing conditions. Risk can be reduced by various strategies, such as creation of defensible space, fuel load reduction, and, in the case of structures, the use of sprinklers and ignition-resistant building materials and construction. As discussed below in Section D.20.1.2, standards have been developed regarding the management of vegetation under and around conductors and structures to reduce risk.

Responsibility areas along the transmission corridor fall into one of the following designations:

- Very High Fire Hazard Severity Zone (Very High FHSZ)
- High Fire Hazard Severity Zone (High FHSZ)
- Moderate Fire Hazard Severity Zone (Moderate FHSZ)
- Non-Very High Fire Hazard Severity Zone (Non-Very High FFSZ)
- Undesignated, or non-wildlands, which may include urban and agricultural uses

In areas of State responsibility, CAL FIRE uses three levels of FHSZ designation: Very High, High, and Moderate. The fire hazard severity zone classification is based on a combination of how a fire will behave and the probability of flames and embers threatening buildings.

For areas of local responsibility, CAL FIRE uses two FHSZ designations: Very High or Non-Very High (the High and Moderate FHSZ designations are not used). The local responsibility area FHSZ rating reflects flame and ember intrusion from adjacent wildlands and from flammable vegetation found in the urban area (CAL FIRE, 2007c). CAL FIRE has designated FHSZs on federal or tribal lands as either Very High FHSZ or Non-Very High FHSZ, similar to the system used for local jurisdiction areas. In portions of the project that are located on federal or tribal lands, responsibility for fire rests with BLM and the Morongo Fire Department for Morongo, respectively.

Figure D.20-1 shows local, State, and federal/tribal responsibility areas (CAL FIRE, 2014a). Figure D.20-2 shows the fire hazard severity zone designations for the study area (CAL FIRE, 2014b).

As shown in Figure D.20-3, over the past 50 years much of the wildlands in the region has burned, with many areas burning over more than once during this period. Figure D.20-3 also shows a subset of the 50-year fire history: the extent of major wildfire's that have occurred in the project vicinity in the past 10 years (CAL FIRE, 2014c).

D.20.1.2 Environmental Setting by Segment

The environmental setting with regard to wildland fire is described below, by project segment.

D.20.1.2.1 Segment 1: San Bernardino

The lands from San Bernardino Substation (MP SB-0) in Redlands south through Loma Linda (to approximately MP SB2.5) are considered by CAL FIRE to be a Non-Very High FHSZ. This area is heavily developed. Residential properties near the interface with wildlands in the southern part of Loma Linda and the wildlands around the San Bernardino Junction (MP SB-3.2) are considered a Very High FHSZ. Vegetation on the land south of Beaumont Avenue in Loma Linda is grass/shrub with some scattered trees in ravines. Fire suppression for all of Segment 1 is a local responsibility.

D.20.1.2.2 Segment 2: Colton and Loma Linda

Vista Substation (MP 0) and the immediate area around it are considered a Non-Very High FHSZ. From Interstate 215 east and south to San Bernardino Junction (MP 5), the entire ROW is considered by CAL FIRE to be a Very High FHSZ. The vegetation in the ROW and in the surrounding undeveloped areas is characterized as grass/shrub, with widely scattered oaks. Fire suppression for this area is a local responsibility, with the exception of two small unincorporated areas in the vicinity of Reche Canyon Road and Prado Lane, which are a State responsibility.

D.20.1.2.3 Segment 3: San Timoteo Canyon

From San Bernardino Junction (MP 5) south to the county line, the area is a Very High FHSZ, with fire suppression a local responsibility. Crossing into Riverside County (near MP 8.8), the ROW passes through a mix of lands designated as Very High FHSZ and Moderate FHSZ. The vegetation in this open landscape is grass/shrub, with widely scattered oaks. South of the San Bernardino/Riverside county line to El Casco Substation is a State responsibility area.

D.20.1.2.4 Segment 4: Beaumont and Banning

East of El Casco Substation, the project crosses into Calimesa and Beaumont (MP 16). CAL FIRE considers this portion of the route a Non-Very High FHSZ. In Banning, most of the route remains Non-Very High FHSZ; however, approximately 2 miles of the route (between Mountain and Sunset Avenues and again between Moore and Bluff Streets) passes through areas designated as Very High FHSZ. Vegetation in Segment 4 is primarily grass/shrub land in Beaumont with maintained landscaped ROW in some residential developments. In Banning, the vegetation is grassland. Fire suppression throughout Segment 4 is a local responsibility.

D.20.1.2.5 Segment 5: Morongo Tribal Lands and Surrounding Areas

From Bluff Street in Banning through Morongo Tribal lands, CAL FIRE designates the land as Very High FHSZ or Non-Very High FHSZ. The vegetation cover on the land is characterized as a mix of grassland and shrub land. Fire responsibility through this segment rests with the Morongo Fire Department or CAL FIRE, depending on who has jurisdiction on specific land parcels.

D.20.1.2.6 Segment 6: Whitewater and Devers

From east of the Morongo lands to near Whitewater Canyon, CAL FIRE identifies the route as Moderate FHSZ. From near Whitewater Canyon to the Devers Substation the area is considered Non-Very High FHSZ. The vegetation cover throughout this segment is a mix of grassland and shrub land. Fire responsibility through this segment is shared by the BLM, CAL FIRE, and local authorities, depending on specific land parcel jurisdiction.

D.20.1.3 Environmental Setting for Connected Actions

The behavior and characteristics of wildfires depend on a number of factors. These include fuels (which vary in composition, cover, and moisture content), weather conditions (particularly wind speed and humidity), topography (slope and aspect), and ignition sources (such as lightning, arson, smoking, campfires, and power lines) as well as management practices (wildfire prevention and suppression efforts).

Vegetation with low moisture content is more susceptible to ignitions and burns more readily than vegetation with higher moisture content. Grasses tend to ignite more easily and burn faster and for a shorter

duration than woody vegetation such as shrubs and trees. Dense vegetation tends to carry a fire farther than patchy vegetation. The presence of invasive annual grasses, however, can provide fuel connectivity in patchy desert shrublands that would otherwise provide inconsistent fuel for a wildland fire. High winds can blow glowing embers off burning vegetation to areas far ahead of the front of a fire, allowing fires to jump fuelbreaks. Low relative humidity conditions will dry out fuels, increasing the likelihood of ignition. Finally, steep slopes and slopes exposed to wind will carry fires rapidly uphill.

Fire Hazard Severity Zones (FHSZ) are areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors that have been mapped by the California Department of Forestry and Fire Protection (CAL FIRE) in accordance with Public Resources Code (PRC) 4201-4204 and Government Code 51175-89. FHSZs are ranked from moderate to very high and are categorized for fire protection as within a Federal Responsibility Area (FRA) under the jurisdiction of a federal agency, within a State Responsibility Area (SRA) under the jurisdiction of CAL FIRE, or within a Local Responsibility Area (LRA) under the jurisdiction of a local agency.

The seven generation facilities identified as actions connected to the WOD project are located in eastern Riverside County, in the vicinity of Desert Center and Blythe. The environmental settings for these connected actions with respect to wildland fire are described below.

Desert Center Area. The 4 connected action projects in vicinity of Desert Center would be in open desert, characterized by sparse vegetation and limited development. The small communities of Desert Center and Lake Tamarisk are located on and just north of I-10, respectively. Topography in the area is nearly level to gently sloping. As identified in the Final EIS for the Desert Harvest Solar Project, the area of Riverside County has been determined to have a low to moderate susceptibility to wildfire.

The area is primarily within a FRA under the jurisdiction of the BLM, and is within a moderate FHSZ. BLM is responsible for the suppression, fuels, and prevention/mitigation/education in this area. Some areas are located within a state responsibility area. The nearest high FHSZ is east of Joshua Tree National Park (JTNP), about 35 miles from the Desert Center area.

The fire station in the area is the Lake Tamarisk Fire Station in Desert Center. Approximately 50 to 60 miles to the east are the Blythe Air Base and Riverbend Volunteer Fire Departments, both in Blythe. Approximately 55 to 60 miles to the west are La Quinta South Fire Station, Coachella Fire Station, and Sun City Shadow Hills, Indio, North Indio, and West Indio Fire Stations in Indio.

In summary, fire risk in the area is moderate, and the potential for a major fire to occur in the area surrounding the area is moderate.

Blythe Area. In the Blythe area, connected actions are three solar projects that would interconnect with the grid at Colorado Rivers Substation. The desert west of Blythe is rated as a moderate fire hazard severity zone. Fire suppression in this area would be a federal or county responsibility, depending on jurisdiction. Blyth itself and its environs are not rated by CALFIRE; fire suppression here is a local (county or city) responsibility.

The City of Blythe Volunteer Fire Department and the Riverside County Fire Department (RCFD)/California Department of Forestry would provide fire protection to the solar project. The project would fall within the RCFD's East Desert Division, which encompasses the lower Coachella Valley, east to the Arizona state line. RCFD services include municipal and wildland fire protection and prevention services, pre-hospital emergency medical services including paramedics, hazardous materials response, and technical rescue services. The nearest fire stations are the Blythe, Ripley, Blythe Air Base, River Bend, and Lake Tamarisk fire stations. All stations are dispatched by CALFIRE Riverside Unit/RCFD Emergency Command Center under the integrated Fire Protection System.

The natural fire risk in the area is moderate, based on vegetation, climate, and topography.

D.20.2 Applicable Regulations, Plans, and Standards

D.20.2.1 Federal

Clearance Requirements for Transmission Lines. A variety of line and tower clearance standards are used throughout the electric transmission industry. In California, the CPUC has adopted its General Order 95 (GO 95, discussed in Section D.20.2.2 below) rather than the National Electric Safety Code (NESC) as the key electric safety standard for the state. Nationally, most transmission line owners follow the NESC rules or American National Standards Institute (ANSI) guidelines, or both, when managing vegetation around transmission system equipment. The NESC deals with electric safety rules, including transmission wire clearance standards, whereas the applicable ANSI code deals with the practice of pruning and removal of vegetation. The following standards, guidelines, rules and regulations identify requirements and suggested practices for vegetation management in transmission line corridors.

- **National Electric Safety Code.** The NESC is a national code covering a variety of basic provisions regarding electric supply stations, overhead electric supply and communication lines, and underground electric supply and communication lines. It contains work rules for construction, maintenance, and operation of electric supply and communication lines and equipment. The NESC is adopted by individual states. The State of California has adopted its own standard (GO 95) governing overhead transmission lines in the State.
- **North American Electric Reliability Council Standards.** NERC is a nonprofit corporation whose members are ten regional reliability councils. NERC's function is to maintain and improve the reliability of the North American integrated electric transmission system, including preventing outages from vegetation located on transmission ROWs, minimizing outages from vegetation located adjacent to ROWs, and maintaining clearances between transmission lines and vegetation on and along transmission ROWs. Standard FAC-003-1, Transmission Vegetation Management Program, applies to all transmission lines operated at 200 kV and above and to any lower voltage lines considered critical to the reliability of the electric system in the region. (In March 2013, the Federal Energy Regulatory Commission (FERC) issued its Final Rule, Order No. 777, approving an updated NERC Reliability Standard, FAC-003-2, expanding the applicability of FAC-003-1 to include overhead transmissions operated below 200 kV.) The transmission owner must prepare, and keep current, a formal transmission vegetation management program (TVMP). The TVMP must identify and document clearances between vegetation and overhead, ungrounded supply conductors, taking into consideration transmission line voltage, the effects of ambient temperatures on conductor sag under maximum design loading, and the effects of wind velocities on conductor sway. Minimum clearance distances must be no less than those set forth in IEEE Standard 516-2003 (now superseded by Standard 516-2009).
- **Institute of Electrical and Electronics Engineers (IEEE) Standard 516-2009.** The Institute of Electrical and Electronics Engineers (IEEE) is a leading authority in setting standards for the electric power industry. Standard 516-2009, Guide for Maintenance Methods on Energized Power Lines, provides minimum vegetation-to-conductor clearances to maintain electrical transmission safety.

Title 14 CFR 91.137, Temporary Flight Restrictions in the Vicinity of Disaster/Hazard Areas. This regulation allows the Federal Aviation Agency (FAA) to temporarily restrict flights in disaster or hazard areas, which includes areas where a wildfire is burning. The restriction is intended to protect persons and property on the surface or in the air for an existing or imminent hazard, to provide a safe environment for

the operation of disaster relief aircraft, and to prevent unsafe congestion from sightseeing and other aircraft above an incident that may generate a high degree of public interest.

14 CFR 91.137 allows an administrator to issue a Notice to Airmen (NOTAM) designating an area within which temporary flight restrictions (TFR) apply. When a NOTAM is issued, no person may operate an aircraft within the designated area unless that aircraft is participating in the hazard relief activities and is being operated under the direction of the official in charge of on-scene emergency response activities.

D.20.2.2 State

CPUC General Order 95: Rules for Overhead Electric Line Construction. CPUC's GO 95 is the key standard governing the design, construction, operation, and maintenance of overhead electric lines in the State. GO 95 safety standards for overhead electric lines include minimum distances for conductor spacing, minimum conductor ground clearance, standards for calculating maximum sag, electric line inspection requirements, and vegetation clearance requirements.

GO 95 Rule 35 governs tree trimming requirements, including minimum vegetation clearances around power lines in extreme and very high fire threat zones in Southern California. The rule requires that these clearances be:

- 4 feet radial distance for any conductor of a line operating between 7.5 kV and 22.5 kV
- 6 feet radial clearances for any conductor of a line operating between 22.5 kV and 300 kV

GO 95 Rule 31.2 requires that lines be inspected frequently and thoroughly for the purpose of insuring that they are in good condition, and that lines temporarily out of service be inspected and maintained in such condition as not to create a hazard.

Public Resources Code (PRC) 4292 (Powerline Hazard Reduction). PRC 4292 requires a 10-foot area in each direction around the outer circumference of any power pole or tower carrying more than 750 volts to be clear of tree branches or ground vegetation. The director or the agency that has primary fire protection responsibility for the protection of such areas may permit exceptions from the requirements of this section, which are based upon the specific circumstances involved.

PRC 4293 (Powerline Clearance Required). Similar to CPUC GO 95, PRC 4293 presents requirements for line clearance including a minimum of:

- 4 feet of vegetation clearance from any conductor (line) operating at 2.4 or more kV but less than 72 kV
- 6 feet of vegetation clearance from any conductor (line) operating at 72 or more kV but less than 110 kV
- 10 feet of vegetation clearance from any conductor (line) operating at 110 kV or higher.

Dead trees, old decadent or rotten trees, trees weakened by decay or disease, and trees or portions thereof that are leaning toward the line which may contact the line from the side or may fall on the line shall be felled, cut, or trimmed so as to remove such hazard.

California Code of Regulations (CCR) Title 14, Article 4, Section 1254 (Minimum Clearances – PRC 4292). CCR 14 Section 1254 identifies minimum clearance requirements on non-exempt utility poles. The minimum clearance provision of PRC 4292 are not required around poles and towers where all conductors are continuous over or through a pole or tower, or where conductors are of a specified design and properly manufactured and installed, or in certain types of agricultural land, or where vegetation is less than

12 inches in height and is fire resistant and planted and maintained to prevent soil erosion and fire ignition. The proposed Project structures would be primarily exempted from the clearance requirements of the CCR section.

The firebreak clearances required by PRC 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer or lightning arrester is attached and surrounding each dead-end or corner pole, unless such pole or tower is exempt from minimum clearance requirements by provisions of 14, CCR, 1255 or PRC 4296. The radius of the cylindroid is 3.1 m (10 feet) measured horizontally from the outer circumference of the specified pole or tower with height equal to the distance from the intersection of the imaginary vertical exterior surface of the cylindroid with the ground to an intersection with a horizontal plane passing through the highest point at which a conductor is attached to such pole or tower. Flammable vegetation and materials located wholly or partially within the firebreak space shall be treated as follows:

- At ground level – remove flammable materials, including but not limited to, ground litter, duff and dead or desiccated vegetation that will propagate fire
- From 0 to 2.4 m (0 to 8 feet) above ground level – remove flammable trash, debris or other materials, grass, herbaceous and brush vegetation. All limbs and foliage of living trees shall be removed up to a height of 2.4 m (8 feet).
- From 2.4 m (8 feet) to horizontal plane of highest point of conductor attachment – remove dead, diseased or dying limbs and foliage from living sound trees and any dead, diseased or dying trees in their entirety.

California Code of Regulations (CCR) Title 14, Article 4, Section 1256 (Minimum Clearances – PRC 4293). CCR 14 Section 1256 identifies minimum clearance requirements to be maintained between conductors and their surroundings. Minimum clearances required by PRC 4293 are to be maintained within the specified radius around the conductor. Minimum clearance includes any position through which the conductor may move and any position through which the vegetation may sway. This accounts for the dynamic movement of both conductors and vegetation.

Power Line Fire Prevention Field Guide 2008 Edition. CAL FIRE, the state’s three investor owned utilities (Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric), and other California electric utilities have mutually developed a comprehensive field guide for their personnel. Its purpose is “to provide information and guidance to the personnel of the fire service agencies and electrical operators for minimum uniform application within the areas of their respective jurisdiction and franchise responsibilities.” In addition to safety of the public, the guide details fire hazard reduction maintenance procedures for the safety of conductors and certain hardware.

D.20.2.3 Local

The CPUC has jurisdiction over the siting and design of the Proposed Project. Although exempt from local land use and zoning regulations, GO 131-D, Section III.C requires “the utility to communicate with, and obtain the input of, local authorities regarding land-use matters and obtain any nondiscretionary local permits.”

Local plans, regulations, and standards vary somewhat by specific jurisdictions. Below are plans, policies, and programs that jurisdictions have developed with regard to hazards, and specifically with regard to fire.

County of San Bernardino General Plan, Safety Element. Goal S 1: The County will minimize the potential risks resulting from exposure of County residents to natural and man-made hazards in the following priority: loss of life or injury, damage to property, litigation, excessive maintenance and other social and economic costs.

Policy S 3.2: The County will endeavor to prevent wildfires and continue to provide public safety from wildfire hazards.

County of San Bernardino General Plan, Land Use Element. Policy LU 7.2: Enact and enforce regulations that will limit development in environmentally sensitive areas, such as those adjacent to river or stream-side areas, and hazardous areas, such as floodplains, steep slopes, high fire risk areas, and geologically hazardous areas.

County of Riverside General Plan, Safety Element. Policy S 5.10: Continue to utilize the Riverside County Fire Protection Master Plan as the base document to implement the goals and objectives of the Safety Element.

City of Banning General Plan, Emergency Preparedness Element. Policy 6: The City shall thoroughly consider and assess vulnerability to natural and manmade disasters or emergencies when reviewing proposals for the siting and development of critical and essential public/quasi-public facilities.

Program 6.A: In order to assure the maximum possible protection from environmental and manmade hazards, including earthquakes and flooding, the City shall consider their vulnerability to natural and manmade disasters and emergencies when reviewing proposals for critical and essential facilities, as well as sensitive land uses.

City of Banning General Plan, Wildland Fire Hazards Element. Goal: Protect human life, land, and property from the effects of wildland fire hazards.

Policy 1: The City shall establish and maintain an information database containing maps and other information which describe fire hazard severity zones, fire threat zone, and other wildfire hazards occurring within the City boundaries, sphere-of-influence and planning area.

Program 3.A: New and substantially remodeled structures or developments shall incorporate wildfire prevention design techniques, such as the use of “defensible space,” fire retardant sidings, optimal site planning and building orientation, landscaping orientation, and other design approaches to reduce wildfire hazards.

City of Beaumont General Plan, Safety Element. Policy 20: The City of Beaumont will continue to provide technical and policy information regarding structural and wild land fire hazards to developers, interested parties and the general public through all available media.

City of Calimesa General Plan, Safety Element. Goal 4: Reduce threats to public safety and protect property from wildland and urban fire hazards.

City of Palm Springs General Plan, Safety Element. Goal SA4: Protect the lives and property of residents, business owners, and visitors from the hazards of urban and wildland fires.

Policy SA4.2 Support brush removal and weed abatement in developed areas to minimize fire risk, and coordinate with the Riverside County Fire Department Hazard Reduction Office regarding jurisdictional issues relating to brush removal.

City of San Bernardino General Plan, Safety Element. Goal 10.11: Protect people and property from urban and wildland fire hazards.

City of Yucaipa General Plan, Safety and Hazardous Waste Element. Goal S1: Minimize the potential risks resulting from the exposure of City residents to man-made and natural hazards with the following priorities: loss of life or injury, damage to property, litigation, excessive maintenance, and other social and economic costs.

Policy C: Inform and educate the public of the risks from natural and man-made hazards, of methods available for hazard abatement, prevention, mitigation and avoidance, and of procedures to follow during emergencies.

Policy Y: Because rapid urban development has resulted in potential fire hazards in wildland/urban intermix areas County-wide, the City shall implement the following actions:

Actions: Apply the regulations of the “Greenbelt” Fire Safety Overlay Ordinance as found in the Development Code to all City areas subject to wildland/urban intermix fire hazards.

D.20.3 Environmental Impacts of the Proposed Project

D.20.3.1 Approach to Impact Assessment

Risk of fire can occur during both construction and operation of a transmission line and its associated facilities. The degree of risk depends on local conditions, such as weather, the type and condition of vegetation, and safety procedures in place. Construction involves numerous personnel, a wide range of work activities, and use of a variety of types of equipment along the ROW, at substations, and at construction yards. During construction, concerns center on worksite preparation to reduce the availability of fuel and the implementation of appropriate procedures to eliminate or manage potential ignition sources. Operations and maintenance involve considerably fewer personnel, limited activities, and much less equipment on the ROW and at substations that during construction. During ongoing operations and maintenance, concerns center on ensuring fuel (vegetation), ground surfaces, and equipment are maintained according to applicable standards and that fire safety requirements and procedures are implemented.

In assessing impacts during construction, consideration is given to existing conditions, including vegetation and existing transmission lines and equipment, and how those may be altered as a result of implementing the Proposed Project. Consideration also is given to the fire-safety related procedures and practices that would apply during construction. In assessing impacts during operations and maintenance, consideration is given to on-going vegetation management and equipment maintenance and safety practices, procedures, and training.

D.20.3.1.1 Applicant Proposed Measures

SCE proposed no Applicant Proposed Measures related to wildland fire.

D.20.3.2 CEQA Significance Criteria

The Hazards and Hazardous materials section of CEQA Guidelines Appendix G identifies one question with regard to wildland fire:

- Would the project “expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?”

This question and others related to wildland fire hazards are addressed in this EIR/EIS by considering the following evaluation criteria, which are based on the nature of the Proposed Project and the existing environment:

- a) Would project activities required during construction or maintenance increase the probability of a wildland fire, resulting in damaging impacts to communities, firefighter health and safety, and/or natural resources?
- b) Would the presence of the overhead transmission lines increase the probability of a wildland fire, resulting in damaging impacts to communities, firefighter health and safety, and/or natural resources?
- c) Would the presence of the project create obstructions or impediments to fire suppression efforts, resulting in damaging impacts to communities and/or natural resources?
- d) Would activities associated with project construction or maintenance result in a vegetation mix that could increase ignition potential and rate of fire spread?

The criteria used to evaluate these questions are (1) the degree to which the existing situation in the ROW with regard to wildland fire risk and fire suppression would be changed by implementation of the Proposed Project and (2) whether such a change is meaningful.

Impacts related to wildland fires are considered significant if any of the following were to occur as a result of implementing the Proposed Project, resulting in a meaningful change from existing conditions:

- **Impact WF-1:** Construction or maintenance activities would increase the probability of a wildland fire.
- **Impact WF-2:** The presence of overhead transmission lines would increase the probability of a wildland fire.
- **Impact WF-3:** The presence of the project would create new obstructions to fire suppression efforts.
- **Impact WF-4:** Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread.

Fire Prevention and Response during Transmission Line Construction. SCE’s standard construction practices are intended to prevent fires during construction, as stated in SCE’s Specification E-2005-104 Transmission Line Project Fire Plan (SCE, 2006), which would apply to the West of Devers project. SCE and/or contractor crews would “furnish all supervision, labor, tools, equipment and material necessary to prevent starting any fire, control spread of fires if started, and provide assistance for extinguishing fires started as a result of transmission line construction activities.” As well, SCE and/or contractor crews would use every reasonable precaution against starting fires where the work is performed, in whole or in part, in an area covered with flammable dry grass, brush, and trees. Such precautions include, but are not be limited to, prohibiting smoking on the jobsite, use of spark arresters on equipment exhaust, and if necessary assigning a Fire Patrolperson whose sole responsibility would be to monitor the crews’ fire prevention activities. The Fire Patrolperson would be equipped with radio or cell phone communication capability (SCE, 2006, page 1-2).

Construction crews would be required to have portable fire-fighting equipment, shovels, axes, and other necessary equipment at all sites where work is in progress, and with all crews in transit. In the event of any uncontrolled fire near the project, and as requested by SCE’s Construction Representative, SCE and/or

contractor crews would furnish any and all of its forces and equipment to extinguish the fire as directed by federal, State, or county fire authorities (SCE, 2006).

Fire Prevention during Transmission Line Operation. Electrical arcing from power lines can pose a fire hazard. This phenomenon is more likely on lower voltage distribution lines, since these lines are typically on shorter structures and in closer proximity to trees and vegetation. Fire hazards from high-voltage transmission lines are greatly reduced through the use of taller structures made of steel and wider ROWs. Further, in high-voltage transmission line ROWs trees and tall shrubs are cleared or trimmed to control this hazard. The risk of a fire due to a fallen high-voltage conductor from an overhead line is minimal due to system protection features linked to the transmission line design.

These hazards are addressed in project design. SCE is required to design the transmission line in accordance with safety requirements of the CPUC's GO 95 and other applicable requirements.

D.20.3.3 Impacts and Mitigation Measures

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire.

Wildland fires put firefighters, residents, workers, buildings, and natural resources at risk. Such fires can damage or destroy property and resources and result in personal injury or death. Any activity that increases the probability of a wildfire would be of major concern. Where the ROW, existing substations, or construction yards are located in or near wildlands, project-related activities at these locations have the potential to be an ignition source for a wildland fire.

Examples of ignition sources include sparks from welding or from metal striking metal or stone, which could ignite surrounding vegetation, parking vehicles over dry vegetation, where hot undercarriages could ignite grass or shrubs, and improperly discarded smoking materials.

SCE is required to design the transmission line in accordance with safety requirements of the CPUC's GO 95 and other applicable requirements, including maintenance of clear areas and prescribed distances between conductors and vegetation.

Mitigation Measure for Impact WF-1: Construction or maintenance activities would increase the probability of a wildfire.

WF-1a Prepare and implement a Fire Management Plan. A Project-specific fire prevention plan for both construction and operation of the project shall be prepared by SCE and submitted to for review prior to initiation of construction. The draft copy of this Plan is to be provided to each fire agency at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. Plan reviewers shall include CPUC, BLM, CAL FIRE, San Bernardino and Riverside Counties, and local municipal fire agencies with jurisdiction over areas where the project is located. Comments on the Plan shall be provided by SCE to all other participants, and SCE shall resolve each comment in consultation with CAL FIRE, BLM, and the Morongo Fire Department, as appropriate. The final Plan shall be approved by these agencies at least 30 days prior to the initiation of construction activities. SCE shall fully implement the Plan during all construction and maintenance activities.

A project Fire Marshal or similar qualified position shall be established by SCE to enforce all provisions of the Fire Management Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. SCE shall monitor construction activities to ensure implementation and effectiveness of the plan.

The Plan shall include at a minimum SCE's Specification E-2005-104 (Transmission line Project Fire Plan), including any updates and amendments, and other requirements specified below.

The plan should recognize and prepare for the high probability that fast moving, wind driven wildfires will burn adjacent or through the Proposed Project with some regularity as the result of severe fire weather conditions, flash fuels such as provided by perennial grasslands, and abundant ignition sources. Wind driven fires can quickly overcome operational and maintenance crews, placing their health and safety at risk.

The Plan shall cover:

- The purpose and applicability of the plan;
- Responsibilities and duties;
- Preparedness training and drills;
- Procedures for fire reporting, response, and prevention that include
 - identification of daily site-specific risk conditions
 - the tools and equipment needed on vehicles and to be on hand at sites
 - reiteration of fire prevention and safety considerations during tailboard meetings
 - daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity,
- Coordination procedures with BLM and San Bernardino and Riverside County fire officials.
- Crew training, including fire safety practices and restrictions,
- Method for verification that Plan protocols and requirements are being followed.

VEG-1b Prepare and implement a Worker Environmental Awareness Program. (See Section D.4.3.3 (Biological Resources – Vegetation, Impacts and Mitigation Measures) for full text.)

Impact WF-2: The presence of overhead transmission lines would increase the probability of a wildland fire.

A live transmission line that arcs to vegetation is a potential ignition source for a fire. Electrical arcing from power lines can be caused by high-voltage surges and spikes and from such events as a line failure due to a tree fall, the toppling of a pole, or a line breaking during a storm.

Arcing that potentially could start a fire is more common with lower voltage distribution lines than with higher voltage lines. Lower voltage lines typically are on shorter structures and in closer proximity to trees and vegetation. Fire hazards from high-voltage transmission lines are reduced through the use of taller structures made of steel and wider ROWs, in which trees are cleared or trimmed to reduce this hazard.

System protection features are designed to minimize fire hazard due to a fallen conductor from an overhead high-voltage line, safeguarding the public and line equipment. These protection systems consist of transmission line relays and circuit breakers designed to rapidly detect faults and cut-off power to avoid shock and fire hazards. This equipment typically is set to operate in a time interval range from 2/60 to 3/60 of a second. The system is designed to de-energize the line, perform a test, and then lock the line out of service.

In addition, the three high-voltage conductors that comprise a circuit are spaced to prevent contact between the conductors in high wind conditions, and the entire line has lightning-strike protection installed overhead. High-voltage transmission lines towers and poles do not have installed on them equipment, such as pole transformers, that might fail. Such pole-mounted equipment normally is associated with distribution circuits.

SCE is required to design the transmission line in accordance with safety requirements of the CPUC's G.O. 95 and other applicable requirements.

Together, these factors make it highly unlikely that the 220 kV transmission line would pose a fire hazard through arcing or line failure. As well, the ROW currently has 220 kV circuits located in it and the Proposed Project would not add a significant new risk as compared to existing conditions.

No mitigation is required. With implementation of the project, conditions in the ROW with regard to wildland fire hazards would not change substantially from existing conditions. SCE would continue maintaining required vegetation clearances and SCE and fire agencies would continue to follow existing or any future procedures for managing wildland fire hazards.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts.

The presence of the structures and conductors comprising the high-voltage transmission line poses a hazard to firefighters and affects how fires near the line would be managed and suppressed. The combination of dense smoke and hot gases generated by a large fire directly under or near a high-voltage transmission line can create a conductive path that increases the potential of a "flashover." A flashover is when electricity jumps across an air gap to create a conductive path. This may occur between wires or from wires to the ground (Powerlink, 2009). The hazard associated with fires near high-voltage lines is two-fold: ionized smoke and gases can provide a pathway for electricity to arc between an energized line and the ground, firefighters, or their equipment; and the presence of the transmission line in airspace used by firefighting aircraft poses a collision risk.

When a fire is not close to a power line, ground firefighting resources conduct fire suppression efforts as normal. If the fire is in closer proximity to a power line, firefighters are instructed to maintain a distance of 1.5 times the height of the structure away from the line, if it is energized. During wildland fire incidents, pilots are supplied with overhead hazard maps and are regularly briefed on the location of power lines in and around the areas where they are operating. SCE's Fire Management Team provides liaisons to all fire agencies within the SCE service territory. This includes wildland fire response, electrical safety training for first responders, hazard mitigation, and prescribed burn coordination. SCE and fire agencies coordinate on when it is necessary to de-energize a line.

Obstructions associated with the presence of the Proposed Project would be similar in nature to those associated with transmission lines currently in the ROW. The Proposed Project consists of the removal of single-circuit 220 kV lines and installation of double-circuit 220 kV lines in the existing ROW. Single circuits would be replaced with double circuits to increase transmission system capacity. Many existing structures would be removed and many of the new structures would be in positioned in different locations and would be somewhat taller than existing structures. The heights of individual structures vary along a transmission line, depending on their topographic locations and the length of the spans between structures. The existing 220 kV towers and poles range up to 174 feet high. The replacement structures would range up to 184 feet high for lattice steel towers and up to 200 feet high for tubular steel poles. Overall, the height difference between existing and proposed structures would be approximately 20 feet.

Based on the instruction to firefighters to keep 1.5 times the structure height away from transmission lines during a fire event, the Proposed Project pole and tower structures would require firefighters to remain approximately 300 feet (1.5 x 200 feet) from the line when it is energized line (as compared to approximately 276 feet now (1.5 x 184)). If the line is energized, a fire passing through the ROW would not be suppressed within this no-go zone. The changes in tower and pole height and location and the conductor spans between these structures would nominally increase the width of this no-go zone, but

that increase does not constitute a significant change from what now exists in the ROW. Pilots engaged in fire suppression have been trained in their work and are aware of the hazards posed by transmission lines, the locations of which are provided to them.

The changes in the 220 kV lines in the ROW under the Proposed Project would not substantially alter the current approach to fire suppression in the vicinity of the ROW and would not create significant new obstructions as compared to existing conditions.

No mitigation is required. Structures and conductors affect how fires near them are suppressed and how close firefighters can get to the lines. However, the Proposed Project would result in constraints similar to those created by existing conditions in the ROW and at substations. With implementation of the project, tower and conductor heights in the ROW and safety distances from the transmission line would increase nominally. This would not create a significant change as compared to existing conditions. SCE and fire agencies would continue to follow existing procedures for conducting and managing wildfire suppression, including making firefighting crews and pilots aware of the location and energization status of lines.

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread.

Disturbed ground is vulnerable to being colonized by invasive vegetation (weeds) that can be more fire prone than the vegetation that was present before the disturbance.

A non-vegetated buffer area is required to be maintained around transmission structures. For all lines operating above 110 kV, this buffer area extends 10 feet out from each footing on a lattice steel tower or from the base of a tubular steel pole. Conductors for transmission lines over 110 kV are required to have a radial distance of 10 feet from any vegetation they could contact. This requirement includes accounting for the sway of the conductor in windy conditions.

Given the height of the conductors above the ground and the distance between conductors and vegetation that are required to be maintained, if a fire were to pass under the transmission line it is unlikely to damage the line. Similarly, support structures are unlikely to be damaged by a fire. In addition, in wildland areas the vegetation along the ROW primarily is grasses and shrubs. When dry, this material would burn rapidly and would not create a sustained heat load sufficient to damage the transmission line.

However, if the vegetation mix is altered through the introduction of species that increase ignition potential and the rate of fire spread, this could increase the risk to any nearby structures or communities.

Mitigation Measure for Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread.

VEG-2a Prepare and implement an Integrated Weed Management Plan. (See Section D.4.3.3 (Biological Resources – Vegetation, Impacts and Mitigation Measures) for full text.)

D.20.3.4 Impacts of Connected Actions

To be viable, connection actions require implementation of the Proposed Project. These have been identified as occurring in the vicinity of Desert Center and Blythe. One project would be a power tower in the Desert Center area, the other 6 connected action projects would be solar projects in these 2 areas. Towers, mirrors, solar arrays, and PV modules are largely fire resistant, being constructed primarily of steel, glass, and aluminum, with various other project components housed in steel structures. Thus, they are not vul-

nerable to firebrands from wildland fires. Interior roads within solar facilities provide access for fire trucks and also serve as breaks in vegetation, helping limit the spread of a fire. Of the 4 wildland fire impacts identified for the Proposed Project, 3 would apply as well to the connected actions. One impact, WF-2 (The presence of overhead transmission lines would increase the probability of a wildland fire), does not apply because the renewable energy projects would not require tall towers for gen-tie lines. Lines would be similar in height to subtransmission and distribution lines and would largely use existing corridors with other lines. The impact numbering below uses the same numbering as the Proposed Project.

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire

Desert Center Area. Land in the Desert Center area has been determined to have a low to moderate susceptibility to wildfire. Construction of solar projects would increase the potential for a wildfire as a result of construction activities and ground disturbance. The risk of wildfire would be related to combustion of native plants caused by activities such as smoking, sparks, and operating vehicles and other equipment off paved roadways. A project-related fire could escape initial containment and pose a hazard to life and property for project personnel and nearby landowners.

Construction of solar projects could introduce non-native plants to the landscape. Because they dry out earlier in the season and can interconnect otherwise patchy native desert plants, non-native plants can increase a landscape's susceptibility to wildfire and increased fire frequency beyond what would be the case under natural conditions.

Activities during operation of solar facilities could increase the risk of wildland fire. The risk would be related to the combustion of vegetation caused by smoking and sparks or other ignition sources.

Future solar projects likely would be subject to similar mitigation measures that have been required at existing solar projects. These include implementing a weed management plan, developing a fire prevention plan, instituting worker training in fire prevention, installing fire detection and suppression systems, undergoing facility inspections by fire authorities, and providing 24-hour access to firefighting agencies.

Blythe Area. Vegetation in the Blythe area has a moderate susceptibility to wildfire. Construction activities would increase the potential for a wildfire as a result of ignition risks and ground disturbance. Activities such as smoking, welding, or parking vehicles over dry vegetation could ignite fires. A project-related fire could escape initial containment and pose a hazard to life and property for project personnel and nearby landowners.

Construction activities associated with solar projects could introduce non-native plants to the landscape. Because they dry out earlier in the season and can interconnect otherwise patchy native desert plants, non-native plants can increase a landscape's susceptibility to wildfire and increased fire frequency during both construction and subsequent operation of the facility.

However, in approving future solar projects, lead agencies are likely to impose similar mitigation measures to those required at existing solar projects. These include implementing a weed management plan, developing a fire prevention plan, instituting worker training in fire prevention, installing fire detection and suppression systems, undergoing facility inspections by fire authorities, and providing 24-hour access to firefighting agencies.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts

Desert Center Area. Although land in the Desert Center area has a low to moderate susceptibility to wildfire, fences and gates restricting access to solar facility sites could impede fire-fighting efforts at the site or nearby, potentially increasing the area affected by a fire. Perimeter security fencing also would limit

access to gates, and could require detouring around the site if a fire occurs beyond the facility. Within sites, the presence of tiers of solar arrays would limit the flexibility and mobility of fire fighters.

Structures associated with solar projects are relatively low to the ground, except for power towers, of which there would be only one or two. The towers and conductor spans of high-voltage transmission lines pose a physical and electrical hazard to fire fighters and fire suppression aircraft. In contrast, solar facilities would not pose similar hazards because of their lower profile.

It is expected that future solar projects would be subject to mitigation requirements regarding wildland fire similar to those required of existing projects. These include requirements to implement a weed management plan, develop a fire prevention plan, implement worker training in fire prevention, install fire detection and suppression systems, undergo facility inspections by fire authorities, and provide 24-hour access to firefighting agencies.

Blythe Area. As noted for the Desert Center area, development of solar facilities can create obstructions that could adversely affect fire suppression efforts. Such obstructions include fencing that limits access to a site or nearby lands and the presence of solar PV arrays that limit mobility within a site. Solar PV units are relatively low to the ground, so would not hamper aerial suppression of fires. Arrays themselves are fire-resistant because of the materials used in their manufacture.

Requirements similar to those imposed on existing projects are expected to be applied to new solar PV projects. These requirements include developing a fire prevention plan, implementing worker fire-safety training, installing fire detection and suppression systems, being subject to inspections by fire authorities, and providing 24-hour access to fire departments.

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread

Desert Center Area. Construction and maintenance activities at solar projects could introduce or facilitate the spread of non-native plants in the landscape. Non-native plants dry out earlier in the season and can interconnect otherwise patchy native desert plants, increasing the landscape's susceptibility to wildfire and increasing fire frequency as compared to previous conditions. However, internal and perimeter roads at solar facilities create discontinuities in vegetative cover, helping to limit the spread of a fire should one occur. As well, vegetation in solar arrays is maintained so it will not interfere with operations or pose a fire risk.

This impact can be addressed by relying on mitigation measures such as those that have been applied to existing solar facilities. It is assumed that future solar projects would be required to adopt measures that include implementation of a weed management plan, implementation of worker training in fire prevention, installation of fire detection and suppression systems, inspections by fire agencies, and provision of 24-hour access to fire departments.

Blythe Area. The introduction of non-native plant material that could contribute to a vegetation fuel mix that would increase both the potential for fire ignitions and the rate of spread of fires could occur at facilities developed in the Blythe area. However, imposition of mitigation measures that have been previously applied to solar projects would address this risk. These measures include weed management programs, development of fire prevention plans, fire prevention training of staff, use of fire detection and suppression systems, regular inspections, and ensuring 24-hour access to fire departments.

D.20.3.5 CEQA Significance Determination for Proposed Project and Connected Actions

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire (Class II)

Construction and maintenance activities associated with the Proposed Project have the potential to ignite wildland fires. Direct construction activities, such as welding or implosive fusing of conductors, could result in sparks or heat that ignite vegetation. Indirect activities, such as parking of vehicle in grass, could also ignite a fire. As part of project design and siting, SCE would be required to meet applicable standards. Mitigation Measure WF-1a (Design the project to comply with applicable regulations and to minimize fire risk), would ensure this occurs. SCE also would implement its Specification E-2005-104 Transmission Line Project Fire Plan. In addition, personnel need to be instructed in appropriate behaviors and actions to take to prevent or suppress fires. Implementation of Mitigation Measures WF-1b (Prepare and implement a fire management plan) and VEG-1a (Prepare and implement a worker environmental awareness program) would ensure that appropriate equipment is available at work sites and procedures are established and communicated for preventing and suppressing wildland fire ignitions. This would reduce this impact to a less than significant level with mitigation (Class II).

For connected actions in the Desert Center and Blythe areas, mitigation measures to address increased wildfire risks during construction and operation of the facilities are expected to be required by the agencies approving those projects. These would be tailored to the nature of the project and local conditions. These would ensure that this impact is less than significant (Class II).

Impact WF-2: The presence of overhead transmission lines would increase the probability of a wildland fire (Class III)

After implementation of the Proposed Project, conditions in the ROW with regard to wildfire risks would not be significantly changed from existing conditions. Towers and conductors would still be present in approximately the same locations. SCE and fire agencies would continue to follow existing procedures and regulations for managing wildfire risk. No mitigation is required. The impact would be less than significant (Class III).

This impact does not apply to the connected actions. The renewable energy projects would not require tall towers for gen-tie lines. Lines would be similar in height to subtransmission and distribution lines and would largely use existing corridors with other lines.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts (Class III)

With implementation of the Proposed Project, structure and conductor heights in the ROW and safety distances from the transmission line would increase nominally. This would not be a significant change from existing conditions. SCE and fire agencies would continue to follow existing procedures and regulations for conducting and managing wildfire suppression. No mitigation is required. The impact would be less than significant (Class III).

For connected actions in the Desert Center and Blythe areas, gen-tie lines would be installed; however, these not as tall as high-voltage transmission lines. Also, the areas of the connected actions are sparsely vegetated, reducing fire risk. During fire suppression activity, pilots and ground crews are advised of the

location of lines. Agencies would follow existing procedures for conducting and managing wildfire suppression. These would ensure that this impact is less than significant (Class III).

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread (Class II)

Ground disturbed by construction and maintenance of the Proposed Project is vulnerable to being colonized by invasive or weedy vegetation that may increase the risk of fire ignition or spread, as compared to pre-disturbance vegetation cover. Implementation of Mitigation Measure VEG-2a (Prepare and implement an integrated weed management plan) would ensure that this impact is less than significant (Class II).

For connected actions, approving agencies are expected to require weed management and abatement programs to address this impact. These measures would ensure that this impact is less than significant (Class II).

D.20.4 Environmental Impacts of Project Alternatives

Three alternatives are considered in this section; all of these alternatives would be located within the existing WOD ROW. The No Project/No Action Alternative is evaluated in Section D.20.5. Alternatives are described in detail in Appendix 5 (Alternatives Screening Report) and are summarized in Section C.

The environmental setting for wildland fire is described by segment in Section D.20.1.2 above; the environmental setting would apply equally to the alternatives.

D.20.4.1 Tower Relocation Alternative

The Tower Relocation Alternative would locate certain transmission structures in Segments 4 and 6 farther from existing homes than would be the case under the Proposed Project.

Four impacts related to wildland fire were identified for the Proposed Project. These impacts also would apply to the Tower Relocation Alternative, which overall would be the same as the Proposed Project, with the exception of the relocated transmission towers that are described above and in Appendix 5. The full text of all mitigation measures referenced in this section is presented in Section D.20.3.3.

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire

The relocated structures would be located in the same area and same fire environment as the Proposed Project structures and would be subject to the same risk of increased probability of wildland fire from ignition sources such as sparks from welding or metal striking metal or stone, parking vehicles over dry vegetation, and improperly discarding smoking materials. The relocation of some towers within the same vicinity would not change the risk associated with these events, which would be the same as for the Proposed Project, as described in Section D.20.3.3.

SCE is required to design the transmission line in accordance with safety requirements of the CPUC's GO 95 and other applicable requirements, including maintenance of clear areas and prescribed distances between conductors and vegetation. As under the Proposed Project, SCE would be required to implement Mitigation Measures WF-1a (Prepare and implement a Fire Management Plan) and VEG-1b (Prepare and implement a Worker Environmental Awareness Program) for the Tower Relocation Alternative.

Impact WF-2: The presence of overhead transmission lines would increase the probability of a wildland fire

A live transmission line that arcs to vegetation is a potential ignition source for a fire. Electrical arcing from power lines can be caused by high-voltage surges and spikes and from such events as a line failure due to a tree fall, the toppling of a pole, or a line breaking during a storm. The relocation of selected towers to new positions near the proposed locations would not change this potential. The same tower and conductor designs would be used, and the same construction and vegetation maintenance standards would apply to this alternative as under the Proposed Project. Together, these factors make it highly unlikely that the 220 kV transmission line would pose a fire hazard through arcing or line failure. As well, the ROW currently has 220 kV circuits located in it and this alternative would not add a significant new risk as compared to existing conditions.

No mitigation is required. With implementation of the alternative, conditions in the ROW with regard to wildland fire hazards would not change substantially from existing conditions or from the conditions that would exist under the Proposed Project. SCE would continue maintaining required vegetation clearances and SCE and fire agencies would continue to follow existing or any future procedures for managing wildland fire hazards.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts

Structures and conductors affect how fires near them are suppressed and how close firefighters can get to the lines. However, the Proposed Project would result in constraints similar to those created by existing conditions in the ROW and at substations. With implementation of the project, tower and conductor heights in the ROW and safety distances from the transmission line would increase nominally. This would not create a significant change as compared to existing conditions. SCE and fire agencies would continue to follow existing procedures for conducting and managing wildfire suppression, including making firefighting crews and pilots aware of the location and energization status of lines.

Relocation of some towers would slightly alter the path of the transmission line, but would not create a condition that differs from the Proposed Project with regard to fire suppression. The towers would be of comparable height to those under the Proposed Project, but would be located somewhat farther from the edge of the ROW.

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread

Disturbed ground is vulnerable to being colonized by invasive vegetation (weeds) that can be more fire prone than the vegetation that was present before the disturbance. The amount of disturbed land would be the same under the Tower Relocation Alternative and the Proposed Project. The alternative location would substitute for the originally proposed location. The same vegetation and ROW maintenance requirements would apply regardless of tower location. Similar to the Proposed Project, if the vegetation mix is altered through the introduction of species that increase ignition potential and the rate of fire spread, this could increase the risk to any nearby structures or communities. Therefore, Mitigation Measure VEG-2a (Prepare and implement an Integrated Weed Management Plan) is required.

CEQA Significance Determination for Tower Relocation Alternative

The CEQA significance determination for each wildland fire impact in this alternative is presented below.

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire (Class II)

As part of project design and siting in implementing this alternative, SCE would be required to meet applicable standards. SCE also would implement its Specification E-2005-104 Transmission Line Project Fire Plan. In addition, personnel need to be instructed in appropriate behaviors and actions to take to prevent or suppress fires. Implementation of Mitigation Measures WF-1b (Prepare and implement a fire management plan) and VEG-1a (Prepare and implement a worker environmental awareness program) would ensure that appropriate equipment is available at work sites and procedures are established and communicated for preventing and suppressing wildland fire ignitions. This would reduce this impact to a less than significant level with mitigation (Class II), similar to the Proposed Project.

Impact WF-2: The presence of overhead transmission lines would increase the probability of a wildland fire (Class III)

With implementation of this alternative, conditions in the ROW with regard to wildfire risks would not be significantly changed from existing conditions or from conditions that would occur under the Proposed Project. Towers and conductors would still be present in approximately the same locations, although some towers would be relocated farther from the edge of the ROW. SCE and fire agencies would continue to follow existing procedures and regulations for managing wildfire risk. No mitigation is required. The impact would be less than significant (Class III), similar to the Proposed Project.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts (Class III)

The Tower Relocation Alternative would move a selected number of structures, but the height and conductor lengths in the ROW and safety distances from the transmission line would be similar to the Proposed Project. SCE and fire agencies would continue to follow existing procedures and regulations for conducting and managing wildfire suppression. No mitigation is required. The impact would be less than significant (Class III).

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread (Class II)

Disturbed ground is vulnerable to being colonized by invasive or weedy vegetation that may increase the risk of fire ignition or spread, as compared to pre-disturbance vegetation cover. Implementation of Mitigation Measure VEG-2a (Prepare and implement an integrated weed management plan) would ensure that this impact is less than significant (Class II). This would be the same for both the alternative and the Proposed Project.

D.20.4.2 Iowa Street 66 kV Underground Alternative

The Iowa Street 66 kV Underground Alternative would place a 1,600-foot segment of subtransmission line underground, rather than overhead.

Four impacts were identified under the Proposed Project for wildland fire. These impacts also would apply to the Iowa Street 66 kV Underground Alternative, which would be the same as the Proposed Project, with the exception of the underground portion of the subtransmission line that is described above and in Appendix 5. The full text of all mitigation measures referenced in this section is presented in Section D.9.3.3, except where otherwise noted.

Iowa Street is not a wildland area; therefore, the impact of this alternative with regard to wildland fire would be identical to the Proposed Project.

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire

Undergrounding the 66 kV line in Iowa Street would not increase the probability of a wildland fire. With the exception of this underground section, the project would be implemented as proposed and would require implementation of mitigation measures as described for the Proposed Project. These include Mitigation Measures WF-1a (Prepare and implement a Fire Management Plan) and VEG-1b (Prepare and implement a Worker Environmental Awareness Program).

Impact WF-2: The presence of overhead transmission lines would increase the probability of a wildland fire

The undergrounding of the line in Iowa Street would not increase the probability of a wildland fire. With the exception of this underground section, the project would be implemented as proposed; no mitigation would be required.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts

The underground line would not create obstructions to fire suppression efforts. With the exception of this underground section, the project would be implemented as proposed; no mitigation would be required.

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread

The underground line would be in a street and would not result in a vegetation fuel mix that increases ignition potential and rate of fire spread. With the exception of this underground section, the project would be implemented as proposed. Implementation of Mitigation Measure VEG-2a (Prepare and implement an integrated weed management plan) would ensure that this impact is less than significant.

CEQA Significance Determination for Iowa Street 66 kV Underground Alternative

The only difference between the Iowa Street 66 kV Underground Alternative and the Proposed Project is the placing of approximately 1,600 feet of 66 kV line underground in an urban setting. The rest of the project would be as proposed. Consequently, the impacts, mitigation measures, and significance of impacts would be the same under both the Iowa Street 66 kV Underground Alternative and the Proposed Project.

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire (Class II)

As part of project design and siting in implementing this alternative, SCE would be required to meet applicable standards. SCE also would implement its Specification E-2005-104 Transmission Line Project Fire Plan. In addition implementation of Mitigation Measures WF-1b (Prepare and implement a fire management plan) and VEG-1a (Prepare and implement a worker environmental awareness program) would ensure that appropriate equipment is available at work sites and procedures are established and communicated for preventing and suppressing wildland fire ignitions. This would reduce this impact to a less than significant level with mitigation (Class II), similar to the Proposed Project.

Impact WF-2: The presence of overhead transmission lines would increase the probability of a wildland fire (Class III)

With implementation of this alternative, conditions in the ROW with regard to wildfire risks would not be changed from conditions under the Proposed Project. Towers and conductors would still be present in the ROW. SCE and fire agencies would continue to follow existing procedures and regulations for managing wildfire risk. No mitigation is required. The impact would be less than significant (Class III), similar to the Proposed Project.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts (Class III)

The Iowa Street 66 kV Underground Alternative would move a length of line underground, but the height and conductor lengths in the ROW with wildfire risks would remain the same as under the Proposed Project. SCE and fire agencies would continue to follow existing procedures and regulations for conducting and managing wildfire suppression. No mitigation is required. The impact would be less than significant (Class III).

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread (Class II)

The undergrounding of this 1,600-foot segment of 66 kV line is not expected to result in disturbed ground that would be vulnerable to being colonized by invasive or weedy vegetation. Elsewhere along the transmission line, the potential for this type of colonization to occur under the alternative would be the same as under the Proposed Project. Implementation of Mitigation Measure VEG-2a (Prepare and implement an integrated weed management plan) would ensure that this impact is less than significant (Class II). This would be the same for both the alternative and the Proposed Project.

D.20.4.3 Phased Build Alternative

The Phased Build Alternative would retain existing double-circuit 220 kV transmission structures to the extent feasible, remove single-circuit structures, add new double-circuit 220 kV structures, and string all structures with higher-capacity conductors.

Four impacts were identified under the Proposed Project for wildland fire. These impacts also would apply to the Phased Build Alternative, which would be located in the same corridor as the Proposed Project and would involve similar although less intense construction activities. The full text of all mitigation measures referenced in this section is presented in Section D.20.3.3, except where otherwise noted.

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire

The new and existing reconducted structures would be located in the same corridor and same fire environment as the Proposed Project structures and would be subject to the same risk of increased probability of wildland fire from ignition sources such as sparks from welding or metal striking metal or stone, parking vehicles over dry vegetation, and improperly discarding smoking materials. The location of the new and existing towers within the same ROW would not change the risk associated with these events, which would be the same as for the Proposed Project. However, due to the decreased amount of construction activity, this risk of starting a fire would be slightly reduced.

SCE is required to design the transmission line in accordance with safety requirements of the CPUC's GO 95 and other applicable requirements, including maintenance of clear areas and prescribed distances between

conductors and vegetation. As under the Proposed Project, SCE would be required to implement Mitigation Measures WF-1a (Prepare and implement a Fire Management Plan) and VEG-1b (Prepare and implement a Worker Environmental Awareness Program).

Impact WF-2: The presence of overhead transmission lines would increase the probability of a wildland fire

A live transmission line that arcs to vegetation is a potential ignition source for a fire. Electrical arcing from power lines can be caused by high-voltage surges and spikes and from such events as a line failure due to a tree fall, the toppling of a pole, or a line breaking during a storm. The new and existing structures that would be reconducted in this alternative would not increase the probability of a wildland fire compared to the Proposed Project. The tower and conductor designs would be slightly different (see Appendix 5), but the same construction and vegetation maintenance standards would apply to this alternative as under the Proposed Project. Proper ROW maintenance would minimize the likelihood that the 220 kV transmission lines in this alternative would pose a fire hazard through arcing or line failure. As well, the ROW currently has 220 kV circuits located in it and the Phased Build Alternative would not add a significant new risk as compared to existing conditions.

No mitigation is required. With implementation of this alternative, conditions in the ROW with regard to wildland fire hazards would not change substantially from existing conditions or from the conditions that would exist under the Proposed Project. SCE would continue maintaining required vegetation clearances and SCE and fire agencies would continue to follow existing or any future procedures for managing wildland fire hazards.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts

Structures and conductors affect how fires near them are suppressed and how close firefighters can get to the lines. However, the Phased Build Alternative would result in constraints similar to those created by existing conditions in the ROW and at substations. With implementation of this alternative, tower and conductor heights in the ROW would increase for the locations where existing single-circuit structures would be replaced with new double-circuit structures. This would not create a substantial change as compared to existing conditions or as compared to the Proposed Project. For various locations along the West of Devers corridor, structures in this alternative would be located further from the edge of the ROW compared to the Proposed Project. In these locations, obstructions to fire suppression efforts for adjacent residences would be reduced slightly. SCE and fire agencies would continue to follow existing procedures for conducting and managing wildfire suppression, including making firefighting crews and pilots aware of the location and energization status of lines. The new and existing towers that would be reconducted in this alternative would not create a condition that substantially differs from the Proposed Project with regard to fire suppression. No mitigation is required.

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread

Disturbed ground is vulnerable to being colonized by invasive vegetation (weeds) that can be more fire prone than the vegetation that was present before the disturbance. The amount of disturbed land would be reduced under the Phased Build Alternative compared to the Proposed Project. For the majority of the corridor, one set of double-circuit structures that would be replaced under the Proposed Project would be left in place under this alternative. The same vegetation and ROW maintenance requirements would apply regardless of tower location. Similar to the Proposed Project, if the vegetation mix is altered through the introduction of species that increase ignition potential and the rate of fire spread, this

could increase the risk to any nearby structures or communities. Therefore, Mitigation Measure VEG-2a (Prepare and implement an Integrated Weed Management Plan) is required.

CEQA Significance Determination for Phased Build Alternative

The CEQA significance determination for each wildland fire impact in this alternative is presented below.

Impact WF-1: Construction or maintenance activities would increase the probability of a wildland fire (Class II)

As part of project design and siting for this alternative, SCE would be required to meet applicable standards. SCE also would implement its Specification E-2005-104 Transmission Line Project Fire Plan. In addition, personnel would need to be instructed in appropriate behaviors and actions to take to prevent or suppress fires. Implementation of Mitigation Measures WF-1b (Prepare and implement a fire management plan) and VEG-1a (Prepare and implement a worker environmental awareness program) would ensure that appropriate equipment is available at work sites and procedures are established and communicated for preventing and suppressing wildland fire ignitions. This would reduce this impact to a less than significant level with mitigation (Class II), similar to the Proposed Project.

Impact WF-2: The presence of overhead transmission lines would increase the probability of a wildland fire (Class III)

With implementation of this alternative, conditions in the ROW with regard to wildfire risks would not be significantly changed from existing conditions or from conditions that would occur under the Proposed Project. Towers and conductors would still be present in approximately the same locations, although some towers would be located farther from the edge of the ROW. SCE and fire agencies would continue to follow existing procedures and regulations for managing wildfire risk. No mitigation is required. The impact would be less than significant (Class III), similar to the Proposed Project.

Impact WF-3: The presence of the project would create new obstructions to fire suppression efforts (Class III)

The Phased Build Alternative would retain some existing structures, and the height and conductor lengths in the ROW and safety distances from the transmission line would be similar to the Proposed Project. For various locations along the West of Devers corridor, structures in this alternative would be located further from the edge of the ROW compared to the Proposed Project. In these locations, obstructions to fire suppression efforts for adjacent residences would be reduced slightly. SCE and fire agencies would continue to follow existing procedures and regulations for conducting and managing wildfire suppression. No mitigation is required. The impact would be less than significant (Class III).

Impact WF-4: Construction or maintenance activities would result in a vegetation fuel mix that increases ignition potential and rate of fire spread (Class II)

Disturbed ground is vulnerable to being colonized by invasive or weedy vegetation that may increase the risk of fire ignition or spread, as compared to pre-disturbance vegetation cover. Implementation of Mitigation Measure VEG-2a (Prepare and implement an integrated weed management plan) would ensure that this impact is less than significant (Class II). This would be the same for both this alternative and the Proposed Project.

D.20.5 Environmental Impacts of No Project / No Action Alternative

D.20.5.1 No Project Alternative Option 1

The No Project/No Action Alternative (No Project Alternative) Option 1 is described in Section C.6.3.1. It would consist of a new 500 kV circuit, primarily following the Devers-Valley transmission corridor and extending 26 miles between Devers Substation. It would also require a new 40-acre substation south of Beaumont, and 4 new 220 kV circuits extending 7 miles from the new Beaumont Substation to El Casco Substation, primarily following the existing El Casco 115 kV ROW. The remainder of the No Project Alternative, from El Casco Substation to the San Bernardino and Vista Substations, would be identical to the Proposed Project. Information on environmental resources and project impacts is derived from the Devers–Palo Verde 500 kV No. 2 Project EIR/EIS (CPUC and BLM, 2006) and the El Casco System Project Draft EIR (CPUC, 2007); which include nearly all of the No Project alignment.

Devers to Beaumont Substation. As shown in Figure D.20.2, the area between Devers Substation to south of Highway 111 is a moderate fire hazard severity zone. The flat and sparsely vegetated landscape between Devers Substation and the foot of the San Jacinto Mountains is highly susceptible to wildfire. When the 500 kV route enters the steep topography of the San Jacinto Mountains, the fire hazards severity ranges from high to very high. Much of this area has burned repeatedly. This high to very high fire hazard severity designation on applies to most of the landscape between here and Beaumont Substation. Steep slopes, fire prone vegetation, and high winds make the area particularly susceptible to wildfire. Examples of fire ignition sources associated with construction include sparks from welding, sparks from metal striking metal or rocks, discarded smoking materials, and parking vehicles over dry vegetation. Similar to the Proposed Project, construction along the No Project Alternative would be required to anticipate and mitigation fire risks by having a comprehensive fire management plan that would require appropriate adequate fire suppression equipment at construction sites, having specific fire-prevention protocols for activities such as welding, banning smoking and open flames, training of workers in fire prevention, prohibiting parking outside of designated areas, and restricting work on Red Flag days.

Beaumont Substation. The Beaumont Substation site is in a moderate fire hazard severity zone, owing to its less steep terrain. Nevertheless, the dry grassy vegetation of the area is prone to fire during much of the year and can spread rapidly under windy conditions. Therefore, similar fire prevention approaches as described for the 500 kV alignment above would apply to the substation area.

Beaumont to El Casco Substation. Much of the 220 kV route between Beaumont Substation and El Casco Substation is in high to very high fire hazard severity zones because of the steep terrain and fire-prone vegetation. As with the rest of the No Project alignment, the area is prone to dry winds during fire season. These conditions are similar to those that occur north of El Casco Substation, in The Badlands west of San Timoteo Canyon Road. Similar fire planning and implementation as applies to the 500 kV line and Beaumont Substation would apply to the 200 kV segment of No Project Alternative Option 1.

D.20.5.2 No Project Alternative Option 2

No Project Alternative Option 2 would require the construction of over 40 miles of new 500 kV transmission line, following the existing Valley-Serrano 500 kV line. The alternative is described in Section C.6.3.2, and illustrated on Figure C-6b. The route passes through rugged and remote lands including the foothills surrounding Steele Peak and Estelle Mountain, and the Cleveland National Forest. With the exception of the Perris Valley at the eastern end of this alternative, the entire route is located on land that has a fire hazard severity classification of Very High. Like No Project Alternative Option 1, ignition sources related to construction and operation of the new 500 kV circuit would have a very high potential to ignite a wildfire in the rugged and often dry land surrounding the corridor. Mitigation would be the same as for Option 1.

D.20.6 Mitigation Monitoring, Compliance, and Reporting

Table D.20-1 presents the mitigation monitoring, compliance, and reporting actions for wildland fire.

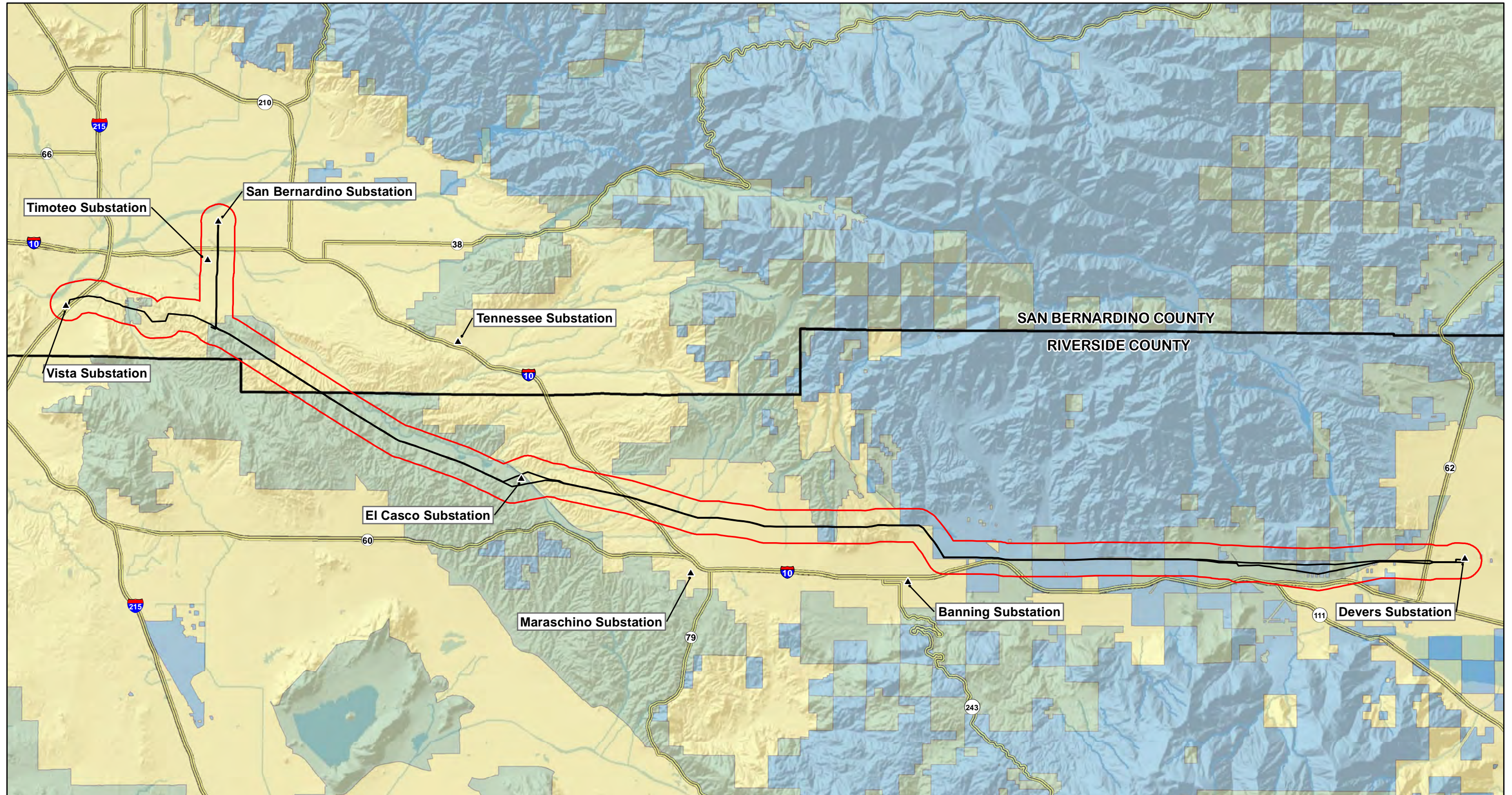
Table D.20-1. Mitigation Monitoring Program – Wildland Fire

MITIGATION MEASURE	<p>WF-1a: Prepare and implement a Fire Management Plan. A Project-specific fire prevention plan for both construction and operation of the project shall be prepared by SCE and submitted to for review prior to initiation of construction. The draft copy of this Plan is to be provided to each fire agency at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. Plan reviewers shall include CPUC, BLM, CAL FIRE, San Bernardino and Riverside Counties, and local municipal fire agencies with jurisdiction over areas where the project is located. Comments on the Plan shall be provided by SCE to all other participants, and SCE shall resolve each comment in consultation with CAL FIRE, BLM, and the Morongo Fire Department, as appropriate. The final Plan shall be approved by these agencies at least 30 days prior to the initiation of construction activities. SCE shall fully implement the Plan during all construction and maintenance activities.</p> <p>A project Fire Marshal or similar qualified position shall be established by SCE to enforce all provisions of the Fire Management Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. SCE shall monitor construction activities to ensure implementation and effectiveness of the plan.</p> <p>The Plan shall include at a minimum SCE's Specification E-2005-104 (Transmission line Project Fire Plan), including any updates and amendments, and other requirements specified below.</p> <p>The plan should recognize and prepare for the high probability that fast moving, wind driven wildfires will burn adjacent or through the Proposed Project with some regularity as the result of severe fire weather conditions, flash fuels such as provided by perennial grasslands, and abundant ignition sources. Wind driven fires can quickly overcome operational and maintenance crews, placing their health and safety at risk.</p> <p>The Plan shall cover:</p> <ul style="list-style-type: none"> ▪ The purpose and applicability of the plan; ▪ Responsibilities and duties; ▪ Preparedness training and drills; ▪ Procedures for fire reporting, response, and prevention that include: <ul style="list-style-type: none"> – identification of daily site-specific risk conditions – the tools and equipment needed on vehicles and to be on hand at sites – reiteration of fire prevention and safety considerations during tailboard meetings – daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity, ▪ Coordination procedures with BLM and San Bernardino and Riverside County fire officials. ▪ Crew training, including fire safety practices and restrictions, ▪ Method for verification that Plan protocols and requirements are being followed.
Location	All project segments
Monitoring / Reporting Action	CPUC/BLM monitor verifies that SCE submits Fire Management Plan and confirms coordination and consultation with fire agencies.
Effectiveness Criteria	Plan is implemented during construction
Responsible Agency	CPUC/BLM
Timing	At least 90 days before construction, submit plan to fire agencies; 30 days prior to construction, submit approved plans or documentation of consultations with fire agencies if approvals or comments have not been obtained.

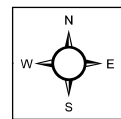
D.20.7 References

- CAL FIRE. 2014a. State Responsibility Area, Statewide GIS layer. <http://frap.fire.ca.gov/data/frapgisdata-subset.php>. Accessed 6/11/2014.
- _____. 2014b. Fire Hazard Severity Zones in SRA & LRA, Statewide GIS layer. <http://frap.fire.ca.gov/data/frapgisdata-subset.php>. Accessed 6/11/2014.
- _____. 2014c. Fire Perimeters, Statewide geodatabase. Found at: <http://frap.fire.ca.gov/data/frapgisdata-subset.php>. Accessed 6/11/2014.
- _____. 2012. Air Program website. http://www.fire.ca.gov/fire_protection/fire_protection_air_program.php. Accessed 9/12/2014.
- _____. 2009. FHSZ County maps: Western Riverside, Local Responsibility. http://frap.fire.ca.gov/webdata/maps/riverside_west/fhszl_map.60.pdf. Accessed 5/13/2014.
- _____. 2008a. Power Line Fire Prevention Field Guide, 2008 Edition. http://cdfdata.fire.ca.gov/fire_er/fpp_engineering_view?guide_id=15. Accessed 5/7/2014.
- _____. 2008b. FHSZ County maps: SW San Bernardino, Local Responsibility. http://frap.fire.ca.gov/webdata/maps/san_bernardino_sw/fhszl_map.62.pdf. Accessed 5/13/2014.
- _____. 2007a. FHSZ County maps: Western Riverside, State Responsibility. http://frap.fire.ca.gov/webdata/maps/riverside_west/fhszs_map.60.pdf. Accessed 5/13/2014.
- _____. 2007b. FHSZ County maps: SW San Bernardino, State Responsibility. http://frap.fire.ca.gov/webdata/maps/san_bernardino_sw/fhszs_map.62.pdf. Accessed 5/13/2014.
- _____. 2007c. Frequently Asked Questions About: Fire Hazard Severity Zoning and New Building Codes for California's Wildland-Urban Interface. http://www.fire.ca.gov/fire_prevention/downloads/Doc_7_FAQs_ALL.pdf. Accessed 5/12/2014.
- CPUC (California Public Utilities Commission). 2007. SCE El Casco System Project Draft EIR, individual resource Sections. <http://www.cpuc.ca.gov/environment/info/aspen/elcasco/toc-deir.htm>. Accessed April 15, 2015.
- CPUC and BLM (Bureau of Land Management). 2006. SCE Devers–Palo Verde 500 kV No. 2 Project EIR/EIS, Sections on West of Devers Alternative. <http://www.cpuc.ca.gov/environment/info/aspen/dpv2/toc-deir.htm>. Accessed April 15, 2015.
- CPUC and USDA (United States Department of Agriculture) Forest Service. 1984. Devers-Valley 500 kV, Serrano-Valley 500 kV and Serrano–Villa Park 220 kV Transmission Line Project Final EIS/EIR. August.
- Marino, Tony. 2014. Electric Grid Safety: What Do We Know? How Do We Know How We Are Doing? Staff Report to the California State Senate Subcommittee on Gas and Electric Infrastructure Safety. August 6.
- Powerlink. 2009. Information Sheet: Fire and High Voltage Transmission Line Safety. Queensland, Australia. http://www.powerlink.com.au/Safety/Documents/Fire_and_High_Voltage_Transmission_Line_Safety.aspx. Accessed 5/14/2014.
- SCE (Southern California Edison). 2006. Specification E-2005-104 Transmission Line Project Fire Plan. February 21.
- Wolff, Eric. 2013. Officials Blame Balloons Tangling with 500-kV Line for Massive Calif. Wildfire. <http://www.snl.com/InteractiveX/Article.aspx?cdid=A-24914261-10808>. Accessed 3/18/14.

This page intentionally blank.



Source: SCE 2013
CalFire 2014a



0 1 2 4 6 Miles

- ▲ Substation
- Transmission Line
- County Line
- ▭ 1-Mile Corridor

Legend

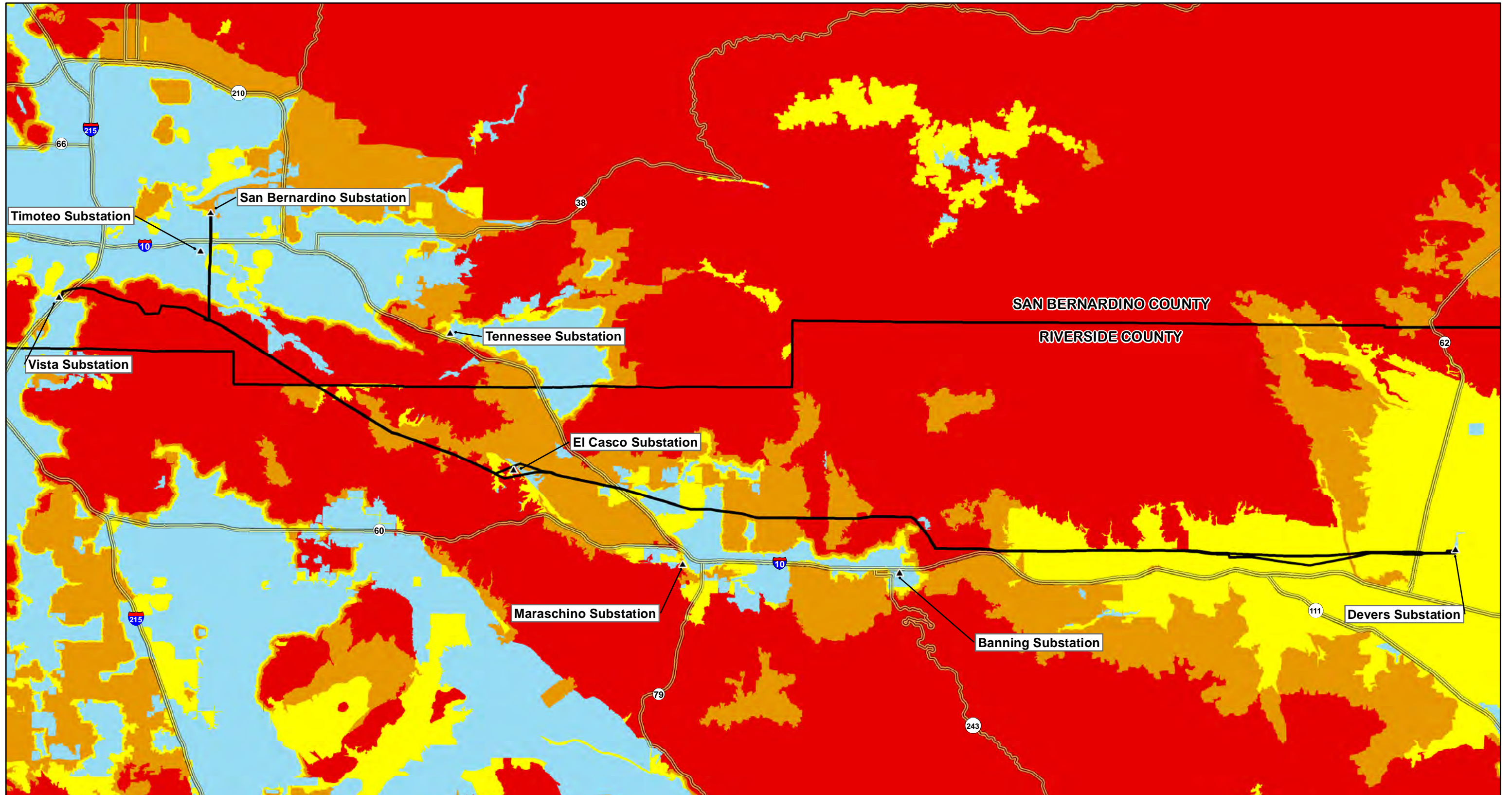
Fire Protection Responsibility Area

- Federal
- State
- Local

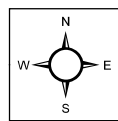
West of Devers Upgrade Project

Figure D.20-1
**Fire Protection
Responsibility Areas**

This page intentionally blank.



Source: SCE 2013
CalFire 2014b



0 1 2 4 6 Miles

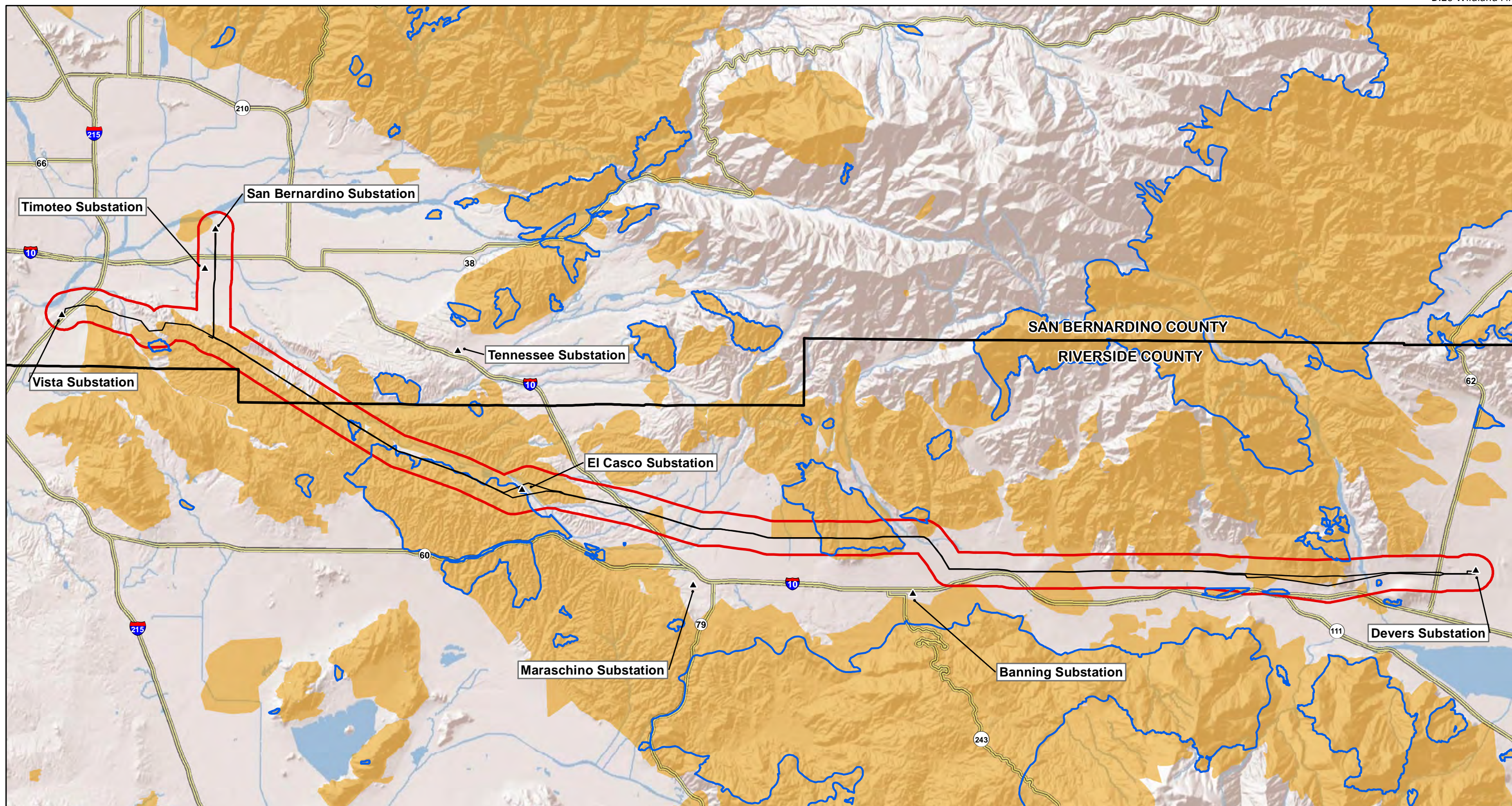
- ▲ Substation
- Transmission Line
- County Line

- Legend**
- Fire Hazard Severity Zones**
- Very High
 - High
 - Moderate
 - Undesignated (non-wildlands)

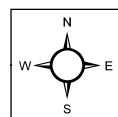
West of Devers Upgrade Project

Figure D.20-2
**Fire Hazard
Severity Zones**

This page intentionally blank.



Source: SCE 2013
CalFire 2014c



0 1 2 4 6 Miles

Legend

- ▲ Substation
- Transmission Line
- County Line
- ▭ 1-Mile Corridor
- Areas Burned, 1963 - 2013
(534 fires, 970,845 acres)
- ▭ Areas Burned, 2004 - 2013
(114 fires, 61,767 acres)

West of Devers Upgrade Project

**Figure D.20-3
Fire History**

This page intentionally blank.