4.18. WILDFIRE

This section includes the following discussion and analysis related to wildfire: existing environmental and regulatory setting; criteria and methodology for evaluating impacts; and the results of the impact assessment, including the identification of potentially significant impacts and corresponding mitigation measures to avoid or substantially lessen such impacts to the extent feasible, as appropriate.

PEIR Scoping Comments

During the PEIR scoping process, the District received two letters containing comments related to fire hazards, which summarized below (see PEIR Scoping Report in Appendix A of this document).

Leadership Counsel for Justice and Accountability

The comment letter states that installation of solar, energy transmission, and energy storage facilities carry the risk of fire hazard and requests thorough analysis of these impacts. The comment letter requests a discussion of how the implementation of the VCIP will comply with: the California Fire Code (24 C.C.R. § 9), the California Strategic Fire Plan, Sections 13000 et seq. of the California Health and Services Code, the Fresno County's General Plan, Fresno County's Emergency Operation Plans, and the Fresno County's Disaster Preparedness Plan, and other pertinent and applicable national, state, and local rules and guidelines. The comment letter states the VCIP should include appropriate mitigation measures to reduce fire hazard risks, such as an evacuation plan, emergency preparedness plan, emergency utility shut-offs, strategic buffer zones, fuel management, and educational information. The letter also states the PEIR must also evaluate to ensure local services such as fire, medical, and police are sufficiently available to serve the VCIP project sites, and at its proposed scale.

Fresno County Fire Protection District (FCFPD)

The comments from FCFPD are contained in a letter that refers extensively to Resolution 2025-02 adopted by the FCFPD Board of Directors (attached to the comment letter). The comment letter states: "As set forth in Resolution 2025-02, the FCFPD has determined that that there is both a direct impact and cumulative impact on emergency response capabilities of the FCFPD to respond to fire, rescue, and medical services emergencies posed by the operation of: 1) solar photovoltaic (PV) generating facilities, and 2) stand-alone energy storage facilities ("PV projects"). The comment letter requests that the PEIR require the project proponent(s) to enter into a Fire Services Agreement with FCFPD consistent with Resolution 2025-02. According to FCFPD Resolution 2025-02, due to a state-mandated property tax exclusion for new solar facilities, the solar PV projects would not provide additional property tax revenues that would support FCFPD fire, rescue and medical emergency services to the solar PV projects. According to FCFPD, this property tax exclusion for new solar facilities creates a need for fire services agreements between solar developers and FCFPD.[1]

[Note: The laws, regulations, codes, and policies pertaining to fire hazard and wildfire are described in Section *4.18.2. Regulatory Context*. Potential fire hazards associated with VCIP implementation are addressed in Section *4.18.3. Environmental Impact Analysis* under Impact WF-1. Potential impacts associated with fire, police and emergency services are addressed in Section *4.15. Public Services*.]

[1] In response, it is noted that the referenced property tax exclusion is due to sunset at the end of 2026. Thus, it is highly likely that VCIP solar facilities will be fully subject to property tax. This increased tax revenue would be substantial for each solar/BESS project and may be sufficient to cover the cost of increased fire protection service that FCFPD anticipates. {AM0012.1}

4.18.1. Environmental Setting

Background

Wildland fires resulting from either natural or manmade causes occur in forests, brush, grasslands, fallow agricultural areas, and vacant lots. Such fires can cause widespread damage to range and forest lands, in addition to threatening the lives and personal property of persons residing in wildfire-prone areas. The type and quantity of fuels, topography, and climate are the primary factors influencing the degree of fire risk. Wildfires can also exacerbate air quality problems, particularly during the summer months when ambient air quality is already low. Structural fires generally result from manmade causes and can easily spread through densely settled urban areas, causing large-scale loss of personal property, personal injury, and, occasionally, fatalities.

Wildland fire protection in California is the responsibility of either the state or local government, depending on location, and wildland fire on federal property is the responsibility of the federal government. Lands within the State Responsibility Area (SRA) typically include upland forested areas (that are not otherwise within the Federal Responsibility Area (FRA)), where the State of California has primary responsibility for the prevention and suppression of wildland fires. The SRA encompasses over 31 million acres where the California Department of Forestry and Fire Protection (CAL FIRE) provides a basic level of wildland fire prevention and protection services. CAL FIRE's mapping of Fire Hazard Severity Zones (FHSZ) for the SRA shows three levels of hazard severity including "Moderate," "High" and "Very High" (CAL FIRE 2024c).

Local responsibility areas (LRAs) include incorporated cities, lowland areas of unincorporated counties, and portions of the desert. LRA fire protection is typically provided by city and county fire departments, fire protection districts, and CAL FIRE under contract to local government. The Fresno County Fire Protection District (FCFPD) has primary responsibility for responding to fires in the VCIP Plan Area. CAL FIRE also evaluates Fire Hazard Severity in LRAs, but the mapping shows only those areas with "Very High Fire Hazard" based on potential of fire spread from adjacent wildlands and from flammable vegetation in the LRA.

For a full description of fire and emergency response agencies, see Section *4.14. Public Services*.

Wildfire Setting

Most of the VCIP Plan Area is on the floor of San Joaquin Valley and consists largely of agricultural land with several small rural communities, dispersed ranch complexes, individual dwellings, agricultural processing facilities, agricultural equipment storage sites, freeway commercial centers, government institutions, solar generating facilities, and other land uses. The agricultural land cover consists variously of row and tree crops, fallow or plowed fields depending on the season, and grazing land. Other vegetation includes landscape tree and shrub species clustered around the rural communities, ranch complexes, and individual dwellings. A narrow portion of the Plan Area located west of I-5 consists of farmland along the base of the foothills of the Diablo Range. Some Plan Area lands located near its western boundary are uncultivated lands covered by annual grasses.

Historical fire mapping of Fresno County indicates the foothill area has historically been subject to several wildfires while there have been no wildfires in the Plan Area east of I-5 since at least 1900, with the exception

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of a few small areas where wildfires in the foothills jumped a short distance over to the east side of the freeway (CAL FIRE 2025b, Fresno County 2023b).

The valley portion of the Plan Area located east of I-5 is entirely within the LRA. The most recent FHSZ mapping by CAL FIRE shows most of the LRA portion of the Plan Area as "unzoned" for wildfire hazard, with several small areas along the east side of I-5 in the Plan Area zoned as High or Moderate Fire Hazard. In addition, there are several small areas of Moderate Fire Hazard dispersed in the southwest corner of the Plan Area near Coalinga. No areas within the LRA portion of the Plan Area are zone Very High Fire Hazard (CAL FIRE 2025a).

Most of the Plan Area located west of I-5 is in the SRA where the lands adjacent to the freeway are zoned Moderate Fire Hazard and the lands farther west toward the Plan Area boundary are zoned High Fire Hazard. SRA lands comprise approximately 26,000 acres of the Plan Area, of which approximately 18,000 acres are in cultivation and about 8,000 acres are uncultivated lands covered with annual grasses. Development Focus Areas (DFA) lands comprise about 2,240 acres of the SRA area with the Plan Area. All of these DFA lands are zoned Moderate Fire Hazard, and no DFA lands are zoned High Fire Hazard. There are no lands in the Plan Area portion of the SRA that are zoned Very High Fire Hazard (CAL FIRE 2024c). (See Section *4.18.2. Regulatory Context* below for additional description of CAL FIRE.)

Factors Contributing to Wildfire

The intensity and extent of wildfires primarily depends on fuels (e.g., vegetation), topography (e.g., slope, elevation, and aspect), and weather/climate (e.g., wind, temperature, and humidity over short and long-term periods). Combinations of these three factors influence the spread of a wildfire once ignited.

Vegetation/Fuels

Vegetation is the fuel that feeds a fire and is a key factor in wildfire behavior. Fuel sources typically include dead and live trees, downed branches, leaf litter, and dried vegetation. Additionally, weather and climate conditions, such as drought, can lead to increasingly dry vegetation with low moisture content, increasing its flammability. Fuel types within the Plan Area include annual grasses and brush in the foothills west of I-5 and seasonal grasses, fallow land, tree crops, and dispersed trees and shrubs on the valley floor. For additional description of vegetation types within the Plan Area, see Section *4.4. Biological Resources*.

Topography

Topographic features can strongly influence fire behavior and can determine how fast a fire moves through an area. Fire typically moves more quickly uphill, compared to either downhill or on flat terrain. As heat rises in front of the fire, it more effectively preheats and dries upslope fuels, providing for more rapid combustion. Following severe wildfires, sloping land is also more susceptible to landslide or flooding from increased runoff during substantial precipitation events. Aspect is the direction that a slope faces, and it determines how much radiated heat the slope will receive from the sun. Slopes facing south to southwest will receive the most solar radiation.

The Plan Area consists of two topographic regions, including: 1) the broad, flat valley floor area east of I-5 that generally slopes from the southwest to the northeast; 2) the gently rising terrain along base of the foothills to the west which reach an elevation of approximately 900 feet at the northwest edge of the Plan Area.

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Weather/Climate

Wind, temperature, and relative humidity are influential factors in fire behavior and susceptibility. Fire moves faster under hot, dry, and windy conditions compared with cool, wet, calm conditions. Wind may also blow burning embers ahead of a fire into vegetation, causing its spread. Drought conditions also lead to extended periods of excessively dry vegetation, increasing the fuel load and ignition potential.

The climate in the Plan Area is characteristic of the southern San Joaquin Valley, which experiences long, hot, and dry summers and short and mild winters. Precipitation occurs in the winter months and is typical of semi-arid climate with annual rainfall averaging 6-inches in the southern Plan Area and 8-inches in the north.

Impacts of Wildfire on Air Quality

As wildfires burn vegetation, large amounts of carbon dioxide, black carbon (a component of fine particulate matter [PM 2.5]), brown carbon (smoke), and ozone precursors are released into the atmosphere. Wildfires also emit a substantial amount of volatile and semi-volatile organic materials and nitrogen oxides that form ozone and organic particulate matter. These emissions can lead to harmful exposures for first responders, nearby residents, and in populations farther from the wildfires. Exposure to these pollutants can cause asthma attacks, coughing, and shortness of breath. These pollutants and their health effects are described in more detail in Section *4.3. Air Quality.*

4.18.2. Regulatory Context

Federal

North American Electric Reliability Corporation (NERC) Standards

The NERC is a nonprofit corporation comprising 10 regional reliability councils, including the Western Electricity Coordinating Council (WECC). To achieve its reliability goal, NERC develops and enforces reliability standards, monitors the bulk power systems, and educates, trains, and certifies industry personnel. To improve the reliability of regional electric transmission systems, NERC developed Standard FAC-003, a transmission vegetation management program including requirements for clearances between vegetation and any overhead, ungrounded supply conductors, while taking into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, fire risk, line terrain and elevation, and the effects of wind velocities on conductor sway. The clearances identified must be no less than those set forth in the Institute of Electrical and Electronics Engineers (IEEE) Standard 516-2003 (*Guide for Maintenance Methods on Energized Power Lines*), which establishes minimum vegetation-to-conductor clearances to maintain electrical integrity of the electrical system (see next item).

National Electric Safety Code (NESC)

The NESC is a national standard for the safe installation, operation, and maintenance of electric power and communication utility systems including power substations, power and communication overhead lines, and power and communication underground lines. Published by the IEEE, the NESC dictates the minimum distance between the phase conductors of the transmission line and the minimum distance between the energized conductors and the ground or to a building or structure. The NESC is used to determine the width of the

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transmission line right-of-way (ROW), to ensure that the energized line will not contact structures built outside of the ROW. The NESC is also used to specify a minimum distance to the ground, to prevent vehicles that drive beneath the line from contacting the conductors.

National Electrical Code (NEC)

The NEC, published by the National Fire Protection Association (NFPA), is a widely adopted model code for the installation of electrical components and systems. Its purpose is to safeguard persons and property from hazards arising from the use of electricity. Article 480 of the NEC identifies insulation and venting requirements for stationary storage batteries for the purpose of reducing potential fire risk.

Western Area Power Administration (WAPA)

All transmission facilities constructed and operated by WAPA are subject to the Health and Safety provisions of WAPA's Construction Standards, specifically Section 1.4.1-1.(5) which requires the contractor to provide "Fire protection procedures and facilities, including requirements in OSHA 1926, Subpart F, 'Fire Protection and Prevention'," which requires the development of a fire protection program. Examples of fire prevention measures include requiring all machinery to be equipped with spark arresters and avoiding any activity that could emit a spark or high heat during very dry and hot conditions, such as those that prompt a Red Flag Warning or Fire Weather Watch advisory by the National Weather Service.

State

California Department of Forestry and Fire Protection (CAL FIRE)

The mission of CAL FIRE is to protect the people of California from fires and to promote healthy forests. In 2023, CAL FIRE's firefighters, fire engines, and aircraft responded to 7,386 wildland fires on 332,822 acres (CAL FIRE 2024b). The Office of the State Fire Marshal supports CAL FIRE's mission to protect life and property through fire prevention engineering programs, law and code enforcement, and education. CAL FIRE provides direction for fire prevention and enforcement within the SRA using fire resource assessments, a variety of available data, mapping, and other tools. Pre-fire management activities, including prescribed burning, fuel breaks, forest health treatments, and removal of hazardous vegetation, are conducted at the unit level under the guidance of CAL FIRE program managers.

CAL FIRE's responsibilities include maintaining FHSZ data and maps for the entire state. There are three classes of fire hazard severity ratings within FHSZs: Moderate, High, and Very High. Fire hazard severity considers vegetation amount, topography, and weather (temperature, humidity and wind), and represents the likelihood of an area burning over a 30- to 50-year time period. The mapping for each county includes separate maps for LRAs, where local fire departments have primary responsibility, and the SRA where CAL FIRE has primary responsibility. These zones were defined for the purpose of identifying measures to be taken to reduce the rate of spreading and the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property. As mentioned above, the valley portion of the Plan Area located east of I-5 is entirely within the LRA, while most of the Plan Area west of I-5 is within the SRA. The FHSZ mapping by CAL FIRE shows most of the LRA portion of the Plan Area as "unzoned" for wildfire hazard, indicating low wildfire hazard. In addition, there are several small areas of Moderate Fire Hazard dispersed in the southwest corner of the Plan Area near Coalinga, (CAL FIRE 2025b). The SRA portions of the Plan Area immediately west of I-5 are zoned Moderate Fire Hazard and the lands farther west in the lower foothills are zoned High Fire Hazard (CAL FIRE 2024c).

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2024 Strategic Fire Plan for California

Developed by the Board of Forestry and Fire Protection, the Strategic Fire Plan outlines goals and objectives to implement CAL FIRE's policies and vision. The 2024 Strategic Fire Plan reflects CAL FIRE's focus on: 1) improving its core capabilities; 2) enhancing their internal operations; 3) ensuring health and safety; and 4) building an engaged, motivated and innovative workforce. CAL FIRE is divided into 21 operating units, generally composed of counties or combination of counties, each of which prepares an annual Unit Fire Plan for its unit. The VCIP Plan Area is located in the Fresno-Kings Operational Unit (CAL FIRE 2024e).

California Emergency Response Plan

Pursuant to the Emergency Services Act (Gov. Code section 8550 et seq.), California has developed an Emergency Plan to coordinate emergency services provided by federal, state, and local governmental agencies and private persons. Under this act, the duly proclaimed existence of conditions of disaster or of extreme peril to the safety of persons and property caused by fire may constitute a "state of emergency" addressed pursuant to the state Emergency Plan. (Gov. Code, sections 8558, 8560.) The State Emergency Plan is administered by the State Office of Emergency Services (OES). The OES coordinates the responses of other agencies, including CAL FIRE as well as the U.S. Environmental Protection Agency (U.S. EPA), California Highway Patrol (CHP), California Department of Fish and Wildlife (CDFW), the nine Regional Water Quality Control Boards (RWQCBs) (including, as relevant to the VCIP, the Central Valley RWQCB), the local air districts (including the San Joaquin Valley Air Pollution Control District) and local agencies. The State Emergency Plan defines the "policies, concepts, and general protocols" for proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multi-agency response efforts whenever state agencies are involved.

Public Resources Code

The California Public Resources Code (PRC) includes fire safety provisions that apply to State Responsibility Areas during the time of year designated as having hazardous fire conditions. During the fire hazard season, these regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arresters on equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire-suppression equipment that must be provided on-site for various types of work in fire-prone areas.

PRC sections 4292 and 4293 require that any person who owns, controls, operates, or maintains any electrical transmission or distribution line must maintain a 10-foot firebreak clearing around and adjacent to any pole, tower, and conductors that carry electric current.

California Fire Code

Similar to the International Fire Code (IFC), the California Fire Code (Fire Code) and the California Building Code (CBC) use a hazards classification system to determine the appropriate measures to protect life and property. The Fire Code includes regulations regarding fire-resistance-rated construction, fire protection systems such as alarm and sprinkler systems, fire services features such as fire apparatus access roads, means of egress, fire safety during construction and demolition, and wildland-urban interface areas. Fire Code Section 4906 contains regulations for vegetation and fuel management to maintain clearances around structures. These

requirements establish minimum standards to protect buildings located in FHSZs within the SRA. Section 608 of the IFC has been adopted by the State of California and Fresno County to minimize risk of fire from stationary battery storage systems and to contain fire in the event of such an incident. Fresno County has adopted the Fire Code in its Ordinance Code as part of its building and construction regulations.

California Code of Regulations Title 14 – Fire Safe Roads

The Board of Forestry maintains fire safe road regulations, as part of the California Code of Regulations (CCR), Title 14. This includes requirements for road width, surface treatments, grade, radius, turnarounds, turnouts, structures, driveways, and gate entrances. These regulations are intended to ensure safe access for emergency wildland fire equipment and civilian evacuation.

California Occupational Safety and Health Administration (Cal/OSHA)

Cal/OSHA is responsible for adoption and administration of standards for safe workplaces, including standards related to hazardous materials handling. Cal/OSHA standards are generally more stringent than federal regulations. Pursuant to CCR, Title 8, Section 1920, Cal/OSHA requires employers to be responsible for the development of a fire protection program to be followed throughout all phases of the construction work, including the provision of firefighting equipment as specified.

California Public Utilities Commission (CPUC)

The CPUC, which has regulatory authority over Investor-Owned Utilities (IOUs) such as PG&E and Southern California Edison (SCE), promulgates General Orders governing the construction and operation of facilities under its jurisdiction. General Order 95 applies to construction and reconstruction of overhead electrical lines including transmission lines. Various rules under General Order 95 pertain to fire safety including the rules requiring the establishment and maintenance of minimum clearances from vegetation and other wires. Enhanced requirements apply in High Fire Threat Districts (HFTDs) as mapped in the CPUC Fire-Threat District Map. No portion of the VCIP Plan Area is mapped as an HFTD on CPUC's Fire-Threat District Map (CPUC 2021).

General Order 166, Standard 1.E requires that IOUs develop a Fire Prevention Plan which describes measures that the electric utility will implement to mitigate the threat of power-line fires generally. Additionally, this standard requires that IOUs outline a plan to mitigate power line fires when wind conditions exceed the structural design standards of the line during a Red Flag Warning in a high fire threat area.

Senate Bill 1028

Senate Bill 1028 (2016) requires each electrical corporation to construct, maintain, and operate its electrical lines and equipment in a manner that will minimize the risk of catastrophic wildfire posed by those electrical lines and equipment, and makes a violation of these provisions by an electrical corporation a crime under state law. The bill also requires each electrical corporation to annually prepare a wildfire mitigation plan and submit it to the CPUC for review. The plan must include a statement of objectives, a description of preventive strategies and programs that are focused on minimizing risk associated with electric facilities, and a description of the metrics that the electric corporation uses to evaluate the overall wildfire mitigation plan performance and assumptions that underlie the use of the metrics. PG&E and SCE have developed Fire Prevention Plans in response to the requirements of SB 1028.

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Senate Bill 901

Senate Bill 901 (2018) expanded upon the wildfire mitigation plan requirements of Senate Bill 1028 and included a number of provisions related to wildfire risk and management in California including, but not limited to, the following: budget adjustments related to emergency response and readiness, the creation of a CAL FIRE Wildfire Resilience Program, and increasing the maximum penalties that can be issued by the CPUC to a public utility that fails to comply with CPUC requirements. Additionally, the legislation requires that utilities prepare wildfire mitigation plans that include elements specified in the bill such as the following: 1) a description of the preventive strategies and programs to be adopted by the electrical corporation to minimize the risk of its electrical lines and equipment causing catastrophic wildfires, including consideration of dynamic climate change risks; 2) protocols for de-energizing portions of the electrical distribution system that consider the associated impacts on public safety, as well as protocols related to mitigating the public safety impacts of those protocols, including impacts on critical first responders and on health and communication infrastructure; and 3) particular risks and risk drivers associated with topographic and climatological risk factors throughout the different parts of the electrical corporation's service territory. These wildfire mitigation plans are required to be reviewed by an independent evaluator. PG&E and SCE have developed Wildfire Mitigation Plans in response to the requirements of SB 901.

Fresno County

Fresno County General Plan

The Health and Safety Element of the Fresno County General Plan (Fresno County 2024b) contains the following goal and policies that may be relevant to wildfire:

B. Fire Hazards

GOAL HS-B: To minimize the risk of loss of life, injury, and damage to property and natural resources resulting from fire hazards.

Policy HS-B.1 **Fire Hazards Review**
The County shall review project proposals to identify potential fire hazards and to evaluate the effectiveness of preventive measures to reduce the risk to life and property.

Policy HS-B.7 **Fire and Emergency Vehicle Access**
The County shall require new discretionary development projects to have adequate access for fire and emergency vehicles and equipment. All major subdivisions shall have a minimum of two (2) points of ingress and egress. The County shall implement feasible recommendations in AB2911 Office of the State Fire Marshall Subdivision Survey Reports, which survey subdivisions without a secondary means of egress routes for evacuation and other fire safety factors.

Policy HS-B.10 **Fire Agency Review of Development Proposals**
The County shall refer development proposals in the Very High Fire Hazard Severity Zones and State Responsibility Areas of the unincorporated county to the appropriate local fire agencies for review of compliance with fire safety standards. If dual

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responsibility exists, both agencies shall review and comment relative to their area of responsibility. If standards are different or conflicting, the more stringent standards shall apply.

Policy HS-B.15 **Fire Protection**
The County shall ensure that any new development will have adequate fire protection, including proximity to adequate emergency services, adequate provisions for fire flow and emergency vehicle access and fire hardened communication, including high speed internet service.

Fresno County Multi-Jurisdictional Hazard Mitigation Plan

Adopted in May 2024, Fresno County's Multi-Jurisdictional Hazard Mitigation Plan is intended to reduce or eliminate long-term risks to people and property from hazards such as floods, wildfire, severe weather, and drought. The plan includes goals and objectives that are consistent with the County's general plan goals and policies related to reducing wildfire hazards (Fresno County 2024e).

Fresno County Master Emergency Services Plan

In October 2017, Fresno County Office of Emergency Services (OES) prepared the updated Master Emergency Services Plan to serve as a guide for response to an emergency or disaster in the unincorporated areas of the County, and to coordinate and assist with the disaster response in jurisdictions both within and outside of the County. The plan outlines a general structure for emergency responders in the event of an emergency in the County and does not establish any specific evacuation routes or plans, standards, goals, or policies (Fresno County 2017d).

Fresno-Kings Unit Strategic Fire Plan

The VCIP Plan Area is located within the Fresno-Kings Operational Unit and would follow goals and objectives outlined within the Fresno-Kings Unit Strategic Fire Plan, which was completed by a collaborative effort with various stakeholders in the Unit, program managers, bureau managers, and battalion chiefs. The Unit's Fire Plan is updated each year based on accomplishments, goals, and objectives outlined by the Unit and the California Strategic Fire Plan. The Unit's Fire Plan is executed through a continued working relationship with CAL FIRE and the FCFPD and is divided into battalions. The VCIP Plan Area is located within the jurisdictional areas of Battalions 14 and 15, which cover the central and western area of the FCFPD in the Fresno-Kings Unit, and together comprise 1,446,013 acres of LRA and SRA (CAL FIRE 2024a).

Fresno County Fire Code

The County Ordinance Code, at Section 15.10.010, adopts and incorporates by reference the Fire Code, contained in the 2022 Edition of the CBC, as the Fresno County Fire Code, which is applicable to all building construction requiring permits from Fresno County (Fresno County 2024i).

4.18.3. Environmental Impact Analysis

METHODOLOGY

This section analyzes the potential for implementation of the VCIP to result in significant environmental impacts related to wildfire. The following evaluation is based on detailed review of CAL FIRE's fire hazard severity mapping, historical fire mapping, and relevant regulations, codes, and plans, as well as terrain, fuel, and climate characteristics, and the characteristics of potential VCIP projects.

SIGNIFICANCE CRITERIA

Based on Appendix G of the state CEQA Guidelines, section IX(g), the project would be considered to result in a significant impact related to wildfire if it would:

a. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

Additionally, based on CEQA Guidelines, Appendix G, section XX, the project, if located in or near the SRA or lands classified as very high fire hazard severity zones, would result in a significant impact related to wildfire if it would:

b. Substantially impair an adopted emergency response plan or emergency evacuation plan.

c. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.

d. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

e. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

4.18.3.1. DIRECT AND INDIRECT EFFECTS

Introduction – Wildfire Hazard Zones

The mapping of FHSZs prepared by CAL FIRE for Fresno County shows all of the Plan Area lying east of I-5 as being within a LRA. This constitutes the vast majority (95 percent) of the Plan Area. Of the small portion of the Plan Area located west of I-5, most is within CAL FIRE's SRA. In total, the lands within the SRA represent approximately five percent of lands within the Plan Area. Lands within the SRA include only approximately two percent of the potential DFA lands, all of which are designated Moderate Fire Hazard. The nearest area within the SRA that is zoned as Very High Fire Hazard on the FHSZ map is located in the Little Panoche Creek watershed at the western edge of Fresno County, approximately 5 miles west of the Plan Area (CAL FIRE 2024c).

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The FHSZ mapping by CAL FIRE shows most of the LRA portion of the Plan Area as "unzoned" for wildfire hazard, indicating low wildfire hazard. There are several small areas of Moderate Fire Hazard in the southwest corner of the Plan Area near Coalinga. No VCIP DFAs or infrastructure sites or corridors are within the Very High Fire Hazard zone (CAL FIRE 2024d).

Impact WF-1. Risk of Wildfire and Related Effects

Implementation of the VCIP Energy Resource and Infrastructure Plans would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Compliance with all applicable regulations, codes, standards, and required fire safety measures during construction, operation, and decommissioning of VCIP clean energy and infrastructure projects, would provide a high degree of protection from wildfire risk. (*Less-than-significant Impact*)

As noted above, approximately 95 percent of the VCIP Plan Area is outside the SRA, and no DFAs or infrastructure sites or corridors are zoned Very High Fire Hazard. Within the small portion of the Plan Area located in the SRA, all 2,240 acres of potential DFAs are in the Moderate Fire Hazard zone. The VCIP Plan Area has a relatively low potential for wildfires under existing conditions. Potential VCIP projects would introduce new elements that could pose a risk for grass fires during the construction, operational, and decommissioning phases.

Construction of the solar facilities, battery storage systems, substations, and gen-tie and transmission lines would involve the use of heavy construction equipment, vehicles, generators, and hazardous materials (e.g., fuels, lubricating oils, and welding materials), which pose potential fire hazards. The risk of fire would be primarily related to smoking, refueling, and sparks from vehicles and equipment off roadways where dry vegetation could be ignited. Welding activities also have the potential to result in the combustion of brush and vegetation.

As discussed in Chapter *2. Project Description*, construction workers would receive training in fire safety and suppression to prevent fire and respond effectively if fire breaks out. During construction of VCIP facilities, water trucks used for dust suppression would be available for suppression of small fires.

During solar facility operation, equipment such as transformers, inverters, and substation equipment would involve the use of oils (e.g., dialectic or mineral oils and lubricants) and fuels, which would pose fire hazards. The planned battery storage systems would likely include lithium-ion batteries which are highly combustible. Maintenance vehicles and panel washing trucks would travel among the solar arrays where low vegetation would be dry in summer and combustible. Smoking by operational personnel would also pose a fire hazard.

To minimize fire hazard, the typical solar project would include design and operational measures for fire prevention and suppression. For projects subject to compliance with Fresno County building ordinances, design measures include incorporation of County design standards for minimum driveway widths, ground clearance, and accessibility to all areas of the project. Fire prevention measures would include vegetation management to minimize the potential for grass fires. VCIP projects would be constructed in accordance with applicable state and local standards. For example, to the extent applicable to a particular project, the Fresno County Fire Code would require fireproofing and protection for all equipment. Solar panels would be manufactured from fire-resistant materials, and the associated electrical equipment would be enclosed in fire-resistant material. Electrical equipment such as transformers and inverters would be placed on concrete

foundation pads and housed in steel and concrete equipment enclosures, minimizing the risk of electrical sparks that could ignite vegetation in the event of equipment failure. All electrical equipment (including inverters) not located within a larger structure would be designed specifically for outdoor installation, and all electrical equipment would be subject to product safety standards. Vehicles and equipment would be required to be parked or stored away from vegetated areas. All construction and operations personnel would be trained in fire prevention and suppression measures, including the safe shut-down of electrical equipment during emergency incidents. Portable carbon dioxide (CO2) fire extinguishers would be mounted at the inverter/transformer pads throughout the project. Employees would be required to be familiar with the use of fire safety equipment, and smoking would be permitted only in designated areas. Each project would be required to prepare and implement a Fire Protection Plan as required by Cal/OSHA.

The energy storage systems would consist of prefabricated electrical enclosures containing battery banks and associated switchboards, inverters, and transformers. All battery containers would be installed on concrete foundations. It is anticipated that a typical solar/BESS facility would include approximately 250 prefabricated enclosures. The enclosures would have appropriate fire suppression systems built to code. Each energy storage unit used on site would be designed in compliance with section 608 of the IFC, which has been adopted by the State of California to minimize risk of fire from stationary storage battery systems and contain fire in the event of such an incident. Under California law, the battery enclosures also must comply with Article 480 of the Electrical Code, which requires appropriate insulation and venting requirements for these types of systems, further preventing risk of fire from the battery enclosures. The battery storage facilities would be equipped with fire suppression systems, smoke detectors, and emergency stops. For a detailed discussion of fire safety issues related to BESS, see Section *4.9. Hazards and Hazardous Materials*, under Impact HAZ-2. As discussed in that section, the regulatory framework to ensure BESS safety and emergency response has advanced significantly in recent years, so that it can be concluded that the implementation of existing laws, codes, standards, and industry-standard practices at the project level, as required by Mitigation Measure HAZ-1, would avoid or reduce to a less-than-significant level the potential health, safety, and environmental hazards associated with BESS operation.

The VCIP solar and energy storage facilities would be designed consistent with Fresno County Fire Code, under which the regulations of the National Fire Protection Association and the American Insurance Association are applied. Where Fresno County building permits are required, the FCFPD's Fire Prevention/Fire Code Enforcement Bureau would review the construction plans for each VCIP project to ensure compliance with all code requirements and standards, including minimum requirements for emergency vehicle access and fire breaks.

Upon completion of each solar and energy storage facility, the exposed soils beneath and around the solar arrays would be revegetated to prevent erosion and dust generation, and also to protect on-site soils for future reclamation upon decommissioning. The exposed areas would be planted with an approved seed mix containing only "low water use" and low-growing plant species. The vegetative cover would be kept low through mechanical means (or sheep grazing) which would reduce fuel load buildup and reduce the potential hazard from grass fires. For each VCIP solar and BESS project, a Vegetation and Soil Management Plan (VSMP) would be required as specified in Mitigation Measure AG-1a. Protection of Long-Term Agricultural Land Capability. The preparation and implementation of the VSMP throughout the operational life of the solar/BESS facilities would ensure that onsite vegetation would be installed and maintained in a manner that would minimize fire hazard.

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The gen-ties and transmission lines would present potential fire ignition sources. However, design and construction of transmission facilities are subject to NESC standards. Transmission lines are designed to withstand strong winds (thus tower or conductor failures are highly unlikely) and vegetation clearance requirements under NERC Standard FAC-003 and its California equivalents would provide for vertical and horizontal separation of towers and lines from existing vegetation and crops (e.g., orchard trees) as a potential ignition source. In addition, transmission lines would be subject to utility Fire Prevention Plans and Wildfire Mitigation Plans prepared pursuant to state law. Also, subsequent environmental documents prepared at the project-specific level, particularly on transmission projects planned for high fire hazard areas such as remote woodland areas subject to high winds, would refer to the Attorney General's Guidance Document "Best Practices for Analyzing and Mitigating Wildfire Impacts of Development Projects under CEQA" (OAG 2022).

Each VCIP project would include setbacks and buffers consistent with the Fresno County Solar Facility Guidelines. Additional separation within and between clean energy projects would be provided by the existing networks of canals, roadways, and farm roads throughout the Plan Area. The risk of spread of wildfire in the Plan Area is generally reduced by the flatness of the terrain and the presence of irrigated cropland. The proximity of County fire services and effective road network of the Plan Area would facilitate accessibility of emergency vehicles and result in favorable response times and further reduce risk of wildfire (see Section *4.14. Public Services* for further discussion of County fire services).

Prior to building permit approval by Fresno County, as applicable to a particular VCIP project, the FCFPD's Fire Prevention/Fire Code Enforcement Bureau would review the construction plans for the VCIP project to ensure compliance with all code requirements and standards, including minimum requirements for emergency vehicle access and fire breaks. The relatively few VCIP projects in the SRA west of I-5 would be subject to enhanced restrictions during fire seasons, as well as review of the project plans by CAL FIRE. A full description of federal, state, and local statutes, regulations, codes, standards, and procedures related to fire safety and wildfire prevention is provided in Section *4.18.2. Regulatory Context*.

Compliance with all applicable regulations, codes, standards, and required fire safety measures during construction, operation, and decommissioning of VCIP clean energy and infrastructure projects would avoid or substantially lessen potential impacts and provide a high degree of protection from wildfire risk. Therefore, the potential impact due to wildfire risk from implementation of the VCIP Energy Resource and Infrastructure Plans would be *less than significant*.

Mitigation Measures: No mitigation is required.

Impact WF-2. Impairment of Emergency Response or Evacuation Plans

Implementation of the VCIP Energy Resource and Infrastructure Plans would not substantially impair an adopted emergency response plan or emergency evacuation plan. (*Less-than-significant Impact*)

The Fresno County Master Emergency Service Plan coordinated by the Fresno County Office of Emergency Services outlines a general structure for emergency responders in the event of an emergency in the County, but

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does not establish any specific evacuation routes or plans, standards, goals, or policies. No other plans designate any emergency or evacuation routes within the Plan Area or vicinity. The Fresno County Multi-Jurisdictional Hazard Mitigation Plan includes an exhibit showing the major roadways in the Plan Area that would be utilized in case of emergency or evacuation. Although these routes are not specifically identified as evacuation routes, they include State Routes and major County roads serving the area. All these State Routes and County roads are in good condition and have low ambient traffic volumes, and thus would have surplus traffic carrying capacity in the event they are needed for emergency access or evacuation routes.

The potential clean energy and infrastructure projects constructed under the VCIP would not alter or impair any of the existing road networks, and their construction and decommissioning would not require any closure of public roads that could impede access by emergency vehicles. Slow moving semi-trucks delivering materials and equipment to potential VCIP project construction vehicles could interfere with emergency response or evacuation procedures on the nearby State Routes and County Roads. The Plan Area includes very few residences or businesses that would be affected by VCIP project construction traffic during an emergency, however. Moreover, the construction contractors would implement the Traffic Control and Management Plan specified in Mitigation Measure TRA-1, which would manage incoming and outgoing construction and decommissioning traffic to avoid traffic conflicts and congestion.

During project operations, potential traffic generated by the VCIP solar and energy storage facilities would be very light and would be dispersed throughout the Plan Area, and thus would not have a substantial effect on emergency response or evacuation plans. The VCIP infrastructure facilities would generate very little to no operational traffic. Therefore, the VCIP projects would have no discernable impact on adopted emergency response and evacuation plans during the construction, operation, or decommissioning phases.

The VCIP Plan Area is served by an effective roadway network for purposes of emergency response and evacuation, and the construction, operation, and decommissioning of potential VCIP projects would not have a substantial effect on emergency response or evacuation procedures. Therefore, implementation of the VCIP Energy Resource and Infrastructure Plans would not impair an adopted emergency response plan or emergency evacuation plan, and the impact would be *less than significant.*

Mitigation Measures: No mitigation is required.

Impact WF-3. Exacerbation of Wildfire Risk due to Slopes, Prevailing Winds, etc.

Implementation of the VCIP Energy Resource and Infrastructure Plans would not exacerbate fire risks due to slopes, prevailing winds, or other factors and thus would not expose project occupants to pollutants from wildfire or uncontrolled spread of wildfire. (*Less-than-significant Impact*)

The VCIP Plan Area has a very gentle gradient with an average slope of 0.4 percent. Along the base of the foothills there are small areas along the western margin of the Plan Area where the maximum slope is 4.0 percent. Thus, the Plan Area does not contain lands with sufficiently steep slopes to substantially accelerate the spread of wildfire. Prevailing winds in the Plan Area are from the west and northwest which would potentially facilitate the spread of wildfire originating in the foothills into the Plan Area. However, the relevant

fire records indicate that wildfires from the foothills have rarely jumped over I-5 to the east, and the few that have done so were limited in extent. The VCIP includes a relatively small acreage of potential DFAs in the SRA portions of the Plan Area west of I-5, representing only approximately two percent of the total DFA acreage. These DFAs are interspersed with irrigated farmland which would provide fire breaks to impede the spread of wildfire to or near these project sites. In addition, the enhanced fire prevention measures and restrictions on activity during fire seasons within the SRA, combined with the heightened development review by the FCFPD, as applicable, and CAL FIRE required within the SRA, would avoid or substantially lessen the potential for wildfire or uncontrolled spread of wildfire within the Plan Area. These factors would minimize the potential for personnel at VCIP facilities or other sensitive receptors to be exposed to pollutants from wildfire.

Implementation of the VCIP Energy Resource and Infrastructure Plans would not exacerbate fire risks due to slopes, prevailing winds, or other factors and thus would not expose personnel at VCIP projects to pollutants from wildfire or uncontrolled spread of wildfire, and the impact would be *less than significant*.

Mitigation Measures: No mitigation is required.

Impact WF-4. Exacerbation of Wildfire Risk due to Installation of Infrastructure

Implementation of the VCIP Energy Resource and Infrastructure Plans would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (*Less-than-significant Impact*)

The proposed VCIP Infrastructure Plan includes gen-tie lines, connecting transmission lines, and five collection substations for collecting and conveying the VCIP solar generation to the power grid. All of these infrastructure elements would be located within the LRA and no planned infrastructure is located within an SRA or a Very High Fire Hazard Severity zone as designated by CAL FIRE.

The gen-ties and transmission lines would present potential fire ignition sources. However, design and construction of transmission facilities and substations are subject to NESC standards. Transmission lines are designed to withstand strong winds (thus tower or conductor failures are highly unlikely) and vegetation clearance requirements under NERC Standard FAC-003 and its California equivalents would provide for vertical and horizontal separation of towers and lines from existing vegetation and crops (e.g., orchard trees) as a potential ignition source. Compliance with existing codes and standards during installation and maintenance of the VCIP infrastructure elements, as required, would ensure that this infrastructure does not exacerbate fire risk or other environmental impacts.

The VCIP solar and energy storage projects would include buffers and fire breaks within their project sites. Each solar facility site would include 20-foot wide perimeter and internal access driveways, and each BESS facility would be surrounded by 10-foot wide vegetation-free area as prescribed by the California Fire Code (and Fresno County Fire Code). Most of the solar and energy storage facility sites would be vegetated with a prescribed seed mix of low growing grasses and forbs for dust control. The vegetation would be managed to keep growth to a maximum of four inches to minimize fuel load. Internal project driveways throughout the

solar and energy storage facilities would consist of compacted soil or would be surfaced with aggregate, and would provide sufficient clearance for access by emergency vehicles. The construction and maintenance vehicles using these driveways would be equipped with spark arresters which would minimize potential for ignition of wildfires. Water for fire suppression would be obtained from an on-site water tank with storage capacity as specified by FCFPD, which would also specify minimum fire flows based on its objective standards. Water supply for the on-site storage tanks would be provided by the District from its existing underground water distribution system serving all lands within the District. On privately-owned DFA lands, water supplies could be provided from either groundwater wells or the District's water supply system depending individual project circumstances. Therefore, the roads, fuel breaks, and water sources for the VCIP facilities would not exacerbate fire risk or other environmental impacts.

Implementation of the VCIP Energy Resource and Infrastructure Plans would not occur on lands classified by Cal Fire as having Very High Fire Risk, and includes small areas of Moderate Fire Risk, with the 99 percent of the Plan Area classified as Low Fire Risk. Projects developed under VCIP would involve the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities), but this infrastructure would serve to prevent fire or aid in the suppression of fire and would not exacerbate wildfire risk or result in temporary or ongoing impacts to the environment. Therefore, implementation of the proposed VCIP Energy Resource and Infrastructure Plans would have a *less-than-significant impact related to wildfire*.

It is noted that the subject of "Wildfire" is separate from the discussion of "Fire Projection" which is addressed in Section *4.15. Public Services*.

Mitigation Measures: No mitigation is required.

Impact WF-5. Exposure of People or Structures to Post-Fire Flooding or Landslides

Implementation of the VCIP Energy Resource and Infrastructure Plans would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (*Less-than-significant impact*)

The Plan Area is virtually level with an average gradient of 0.4 percent from southwest to northeast. Small areas at the western edge of the Plan Area along the base of the foothills have a maximum slope of 4.0 percent. Based on USGS mapping of landslide susceptibility, these extreme western edges of the Plan Area are mapped as having a low susceptibility to landslides, and the steeper slopes outside the Plan Area farther to the west in the Diablo Range are mapped as medium and high susceptibility to landslides. The valley floor portions of the Plan Area are mapped as having no landslide susceptibility (USGS 2025b).

Approximately two percent of the potential DFA lands are located in the SRA and are designated Moderate Fire Hazard by CAL FIRE. Approximately 50 acres within these DFA areas are mapped as having low landslide susceptibility, and this area has a moderate slope of four percent. As discussed under Impact WF-1, compliance with all applicable codes, standards, and required fire safety measures during construction, operation, and decommissioning of VCIP clean energy and infrastructure projects, would provide the VCIP

facilities with a high degree of protection from wildfire risk. In the unlikely event of wildfire occurring at a solar or energy storage facility located on the 50-acre area with low landslide susceptibility, the soil exposed by such a fire could be mobilized by a post-fire storm event and could be carried downslope in a minor flood/debris flow. However, given that the gradient of the affected area is just four percent, and the lands downslope of the affected area have a very gradual gradient of two percent, it is unlikely that any flood/debris flows generated would be substantial or would travel far or be very deep. Moreover, drainage controls would be in place to prevent runoff from flowing beyond the site boundaries. During construction and decommissioning, runoff, erosion, and sedimentation would be controlled by BMPs required in the SWPPPs, including stormwater/sediment basins which would capture runoff generated at the site. During facility operation, these basins would serve as debris basins that would capture any post-fire flood/debris flows generated at the site. Additionally, since the downslope lands consist of cultivated fields with no structures, the potential for exposure of people or structures to risks of flooding or landslides would not be substantial.

The remaining 98 percent of potential DFA lands within the Plan Area have gradients of less than two percent, and 99.9 percent of potential DFA lands are mapped as having no landslide susceptibility. The VCIP infrastructure elements would be located entirely on the valley floor where the land is essentially flat and not susceptible to landslides. In the unlikely event of wildfire within a solar and/or energy storage facility on a DFA site, or within an infrastructure site or corridor, the level terrain would prevent initiation of post-fire runoff, flooding, slope instability, landslides, or drainage changes.

In summary, implementation of the VCIP Energy Resource and Infrastructure Plans would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, and the impact would be *less than significant*.

Mitigation Measures: No mitigation is required.

4.18.3.2. TRANSMISSION CORRIDORS OUTSIDE THE VCIP

The transmission corridors for delivery of solar generation from VCIP projects to urban electricity markets in northern and southern California have been identified at a conceptual level in this PEIR to allow a very general discussion of environmental impacts associated with transmission line development in these corridors for informational purposes. These transmission delivery corridors extend far beyond the District's boundaries and are not part of the proposed VCIP. Planning and approval of these outside transmission lines are under the jurisdiction of state and federal energy regulatory agencies, public utilities, and counties and cities. The following discussion provides an overview of potential impacts associated with the outside transmission lines with respect to wildfire and is included for informational purposes only.

Risk of Wildfire and Related Effects

The fire hazard mapping by CAL FIRE shows that approximately half of the potential outside transmission corridors are in the SRA, with the remainder in the LRAs of the affected counties. The LRAs are located in the valley floor areas of the San Joaquin and Antelope Valleys, and the SRA lands cover the mountainous terrain of the Coast Ranges, the Tehachapi and the San Gabriel Mountains. Approximately six miles along the potential southern transmission corridor in the foothills of the San Gabriel Mountains are mapped as Very High Fire

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Hazard zone. The 176 miles of potential transmission corridor in the LRAs are "unzoned" for fire risk. Within the SRA, approximately 54 miles of proposed corridor are mapped as High Fire Hazard, 86 miles are mapped as Moderate Fire Hazard, and 33 miles are in the Low Fire Hazard zone (CAL FIRE 2024d).

The transmission lines would present potential fire ignition sources that would increase the potential for wildfire particularly in the remote mountain areas. However, design and construction of transmission facilities are subject to NESC standards. Transmission lines are designed to withstand strong winds (thus tower or conductor failures are highly unlikely) and vegetation clearance requirements under NERC Standard FAC-003 and its California equivalents would provide for vertical and horizontal separation of towers and lines from existing trees as potential ignition sources. The transmission lines would also be subject to utility Fire Prevention Plans and Wildfire Mitigation Plans prepared pursuant to state law.

The transmission lines would be routed adjacent to existing transmission lines and thus would utilize existing access roads to the tower sites particularly in the mountainous areas. The transmission segments passing through the SRA in the mountains would be subject to enhanced restrictions on construction during fire seasons, as well as review of these projects by CAL FIRE.

Compliance with all applicable regulations, codes, standards, and required fire safety measures during construction and operation of the outside transmission lines would avoid or substantially lessen potential impacts and provide a high degree of protection from wildfire risk.

Impairment of Emergency Response or Evacuation Plans

The transmission lines would be constructed at numerous installation sites throughout the region. Construction activity would be focused on the tower sites and all equipment and components would remain off-road after delivery. The public roadways in the potential corridor areas are in good condition and have low ambient volumes. The transmission projects would not alter or impair any of the existing road networks, and their construction would not require any closure of public roads that could impede access by emergency vehicles. The valley floor areas traversed by the potential transmission corridors include very few residences or businesses that would be affected by transmission construction traffic during an emergency. Construction of transmission crossings over public roads would be performed without road closures. Also, construction contractors would implement traffic control plans which would manage construction traffic to maintain safe driving conditions for the public and avoid traffic conflicts and congestion.

The transmission segments in the mountainous SRA would be accessed by utility access roads for the existing transmission lines and would have minimal effects on the very lightly traveled public roads in these remote areas. While these areas include few residences or businesses, construction of the transmission lines would include traffic control plans and would not impede emergency access and evacuation when needed.

Once completed, the operation and maintenance of the transmission lines would involve very low intensity activity consisting of periodic inspections and repairs, and on rare occasions would include replacement of components. These activities would have little or no effect on emergency response or evacuation plans.

The lands traversed by the outside transmission lines are served by an effective roadway network for purposes of emergency response and evacuation. Construction and operation of the transmission lines would not have a substantial effect on emergency response or evacuation plans and procedures.

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Exacerbation of Wildfire Risk due to Slopes, Prevailing Winds, etc.

The potential transmission segments in the LRAs in the San Joaquin Valley would pass over lands that are essentially flat with vegetation consisting of agricultural crops and few trees. Given the absence of sloping lands and moderate prevailing winds, the wildfire risk would not be exacerbated by conditions in this area. In the Antelope Valley segments, the land is gently sloping but subject to strong winds. Given the sparse vegetation of this semi-desert valley, the potential exacerbation of wildfire would be moderated by generally low fuel loads.

In the SRA lands that would be crossed by the transmission corridors, most of these mountain areas consist of steep terrain with variable fuel loads ranging from oak forests to savanna grasslands. These SRA lands are subject to variable winds with the potential for strong gusts through mountain gaps. All these mountain areas have been subject to historical wildfires, although the western corridor over the Coast Ranges to Moss Landing has undergone relatively few wildfires in the past (CAL FIRE 2025b).

In response to the severe wildfire conditions throughout the state over the past 10 years, all California electrical utilities have been required by state legislation to prepare Fire Prevention Plans and Wildfire Mitigation Plans. Implementation of these plans, along with compliance with applicable regulations, codes, and construction standards, reduce the risk that the outside transmission lines would be subject to wildfires exacerbated by adverse conditions of slope, prevailing winds, and other factors.

Exacerbation of Wildfire Risk due to Installation of Infrastructure

As electrical infrastructure, transmission lines generally do not require supporting infrastructure other than dedicated access roads in remote areas. Within the valley floor segments, the transmission corridors would be accessible by existing public roads and farm roads and thus would require few, if any, dedicated access roads. Within mountainous areas, the transmission lines would run adjacent to existing transmission lines that have existing access roads. Maintenance crews would be trained in fire prevention and equipment and vehicles would include spark arresters. The utility access roads are closed to the public which limits potential for human-caused fire ignition. Compliance with regulations, codes and safety procedures applicable to maintenance activities would minimize the potential for the outside transmission lines to be subject to wildfire risk exacerbated due to installation of infrastructure.

Exposure of People or Structures to Post-Fire Flooding or Landslides

Approximately half of the overall length of the outside transmission corridors would pass through mountain and foothill areas with moderate to steep slopes. Most of these areas are mapped as having moderate to high susceptibility to landslides. The only area mapped with very high landslide susceptibility is in the San Gabriel Mountains northwest of the Vincent Substation (USGS 2025b). Thus, the potential for post-fire flooding or landslides is high in the mountain transmission segments. However, the mountainous areas traversed by the transmission corridors do not include many residents or businesses. As such, few people or structures would be exposed to significant risks of downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes as a result of potential wildfires in the vicinity of the outside transmission corridors.

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4.18.3.3. CUMULATIVE IMPACTS

Risk of Wildfire and Related Effects

As discussed under Impact WF-1, most of the VCIP Plan Area is located within the LRA which is "unzoned" for fire hazard by CAL FIRE. Approximately five percent of the Plan Area is in the SRA west of I-5, but none of these lands are zoned Very High Fire Hazard. All potential DFAs in the SRA are zoned Moderate Fire Hazard. The VCIP clean energy and infrastructure projects would introduce new ignition sources to Plan Area. However, the risk of wildfire would be avoided or substantially reduced through fire safety and protection measures to be incorporated into the design, construction, and operation of the VCIP facilities, as required by applicable laws, regulations, codes, and standards. These fire safety and protection measures would reduce the risk of wildfire within the VCIP Plan Area to less-than-significant levels.

Most of the pending, approved, and completed projects in the Plan Area and vicinity are located within the LRAs of Fresno and Kings counties, which are "unzoned" for fire hazard by CAL FIRE. Three pending projects are located in the SRA west of I-5, but none of these projects are on lands zoned Very High Fire Hazard. The cumulative projects would implement fire safety and protection measures as required by existing laws, regulations, codes, and standards, which would reduce the wildfire risk at each cumulative project to less-than-significant levels.

The lands traversed by the outside transmission corridors would be subject to development in the vicinity as allowed under the counties' general plans. Most of the development in the vicinity of the transmission corridors would likely consist of dispersed residential construction in rural areas or at urban interface areas. Enforcement of local building and fire codes would require enhanced fire protection measures in the rural areas including fireproofing, vegetation clearance, and defensible space standards. The transmission projects would also be subject to vegetation clearance requirements, numerous other fire safety requirements, and enhanced restrictions on construction during fire season in the SRA. It is unlikely that the low wildfire risk associated with rural development under the county general plans would combine with low wildfire risk of the transmission projects in the vicinity to result in a cumulatively significant wildfire risk.

Wildfire risks associated with potential VCIP projects, including outside transmission projects, are not substantial and are not expected to combine with other cumulative projects to produce a cumulatively significant wildfire risk. Therefore, the cumulative wildfire risk would be *less than significant and the contribution by VCIP projects would not be considerable*.

Impairment of Emergency Response or Evacuation Plans

As discussed under Impact WF-2, the County's emergency response plans do not specifically identify evacuation routes. However, the VCIP Plan Area and vicinity have an effective roadway network consisting of State Routes and County roads. These roadways are in good condition and have low ambient traffic volumes, and thus would have surplus traffic carrying capacity in the event they are needed for emergency access or evacuation routes. The VCIP projects would implement traffic control plans to manage construction traffic to avoid traffic conflicts and congestion. Traffic generated by operation of VCIP facilities would be very light. Therefore, the VCIP projects would have no discernable impact on adopted emergency response and evacuation plans during the construction, operation, or decommissioning phases.

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Most cumulative projects in the VCIP vicinity have been completed and are operational. Several large solar and energy storage projects are pending or approved but not yet constructed. However, these projects are widely separated, and each project would implement traffic control plans, and thus their construction traffic is unlikely to combine to create cumulative traffic congestion that would impede emergency access or impair evacuation procedures (see Section *4.16. Transportation*, Mitigation Measures TR-1 [Traffic LOS Mitigation for Project Construction and Decommissioning] and TR-2 [Traffic Safety Measures for VCIP Project Construction and Decommissioning]). Moreover, it is likely that the pending and approved solar and energy storage projects would be completed prior to 2029 when the first major phase of VCIP development is proposed to commence. The very light operational traffic generated by these projects would not combine with VCIP construction traffic to interfere with emergency access or evacuation procedures.

In addition, several relatively small urban development projects in the City of Lemoore are pending or approved but not yet constructed. These projects are far removed from the nearest potential VCIP projects, so the traffic they generate would be unlikely to interact with traffic from VCIP project construction or operation. These projects are not located in a fire hazard zone and their construction and operation is unlikely to interfere with emergency access or evacuation plans, either individually or cumulatively.

The lands in the vicinity of the outside transmission corridors would be subject to rural development as allowed in the counties' general plans. This development would mainly consist of dispersed rural residential that would be required to have access to a maintained public road. Construction and operation of the outside transmission lines would not result in closure of public roads, and the low intensity of traffic generation by construction and operational activity associated with the transmission lines would not impede emergency access or impair evacuation procedures. As such, it is unlikely that the effects of the transmission line construction and operation would combine with cumulative rural development in the vicinity to adversely affect emergency access or evacuation procedures.

Construction, operation, and decommissioning of potential VCIP projects, in addition to outside transmission projects, combined with other cumulative projects would not have a substantial effect on emergency response or evacuation procedures. Therefore, the cumulative impact would be *less than significant and the contribution of VCIP projects would not be considerable.*

Exacerbation of Wildfire Risk due to Slopes, Prevailing Winds, etc.

As discussed under impact WF-3, the VCIP Plan Area does not contain lands with sufficiently steep slopes to substantially accelerate the spread of wildfire. Prevailing winds in the Plan Area are from the west and northwest, which could facilitate the spread of wildfire originating in the foothills into the Plan Area. However, the relevant fire records indicate that wildfires from the foothills have rarely jumped over I-5 to the east, and the few that have done so were limited in extent.

The pending, approved, and completed cumulative projects in the Plan Area and vicinity are similarly located on essentially flat sites within the Fresno and Kings Counties' LRAs with no history of wildfire. Three cumulative projects in the SRA west of I-5 are within or near historical burn areas. However, these sites are also flat and thus would not exacerbate wildfire risk due to slopes. While prevailing winds could exacerbate wildfire risk in the SRA area, there are no potential DFAs near or downwind of the three cumulative project sites in the SRA that could combine with the cumulative projects to substantially increase the cumulative wildfire risk.

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Approximately half of the outside transmission corridors would traverse mountainous areas with moderate to steep slopes in areas where strong wind gusts can occur. A small amount of dispersed rural development would be allowed in the vicinity of these transmission lines under the counties' general plans. Although the slope and wind conditions could exacerbate wildfires in these areas, the strict code requirements and standards applicable to transmission construction, including restrictions on construction in the SRA during fire season, as well as implementation of the utilities' fire protection and wildfire mitigation plans, would reduce the potential for ignition and spread of wildfire. Stringent fire-safe building requirements would also apply to construction of any residential or other development in these areas. Thus, the potential for cumulative exacerbation of wildfire due to slopes, winds, and other factors due the effects of transmission line construction and operation, combined with the effects of other cumulative development in these areas would be less than significant.

Construction, operation, and decommissioning of potential VCIP projects, in addition to outside transmission projects, would not combine with other cumulative projects to exacerbate fire risks due to slopes, prevailing winds, or other factors. The cumulative impact would be *less than significant and the contribution of VCIP projects would not be considerable*.

Exacerbation of Wildfire Risk due to Installation of Infrastructure

As discussed under Impact WF-4, the proposed VCIP includes infrastructure such as substations and gen-tie and transmission lines that would present potential fire ignition sources. Compliance with applicable codes and standards during installation and maintenance of the VCIP infrastructure elements as required by state and federal energy regulatory agencies, public utilities, and counties and cities, would ensure that this infrastructure does not exacerbate fire risk.

Within the VCIP Plan Area and vicinity, several large solar and energy storage projects are pending or approved but not yet constructed. These cumulative projects would include project substations and gen-tie lines to connect with the state electrical grid. This infrastructure would be designed, constructed and operated in compliance with applicable laws, regulations, codes, and standards to ensure that this infrastructure does not exacerbate fire risk. Therefore, the cumulative potential to exacerbate wildfire risk would be less than significant.

The outside transmission lines would introduce new infrastructure, much of it through mountainous areas of the SRA. The outside transmission lines would be constructed adjacent to existing transmission lines, however. Since the new transmission lines would be served by existing utility access roads that serve the existing transmission lines, few if any new access roads would be required. The general plans of the affected counties would allow rural residential development in the vicinity of the transmission lines. Strict code requirements, construction standards, fire prevention plans, and mitigation plans would apply to the new transmission lines. The new residential construction in the hillside areas would also be subject to strict fire prevention and protection requirements in the SRA. Thus, the installation of infrastructure associated with the outside transmission lines would not combine with the effects of new rural development in the vicinity to cumulatively exacerbate the risk of wildfire.

In summary, the construction, operation, and decommissioning of potential VCIP projects, in addition to outside transmission projects, would not combine with other cumulative projects to exacerbate fire risks due to installation of infrastructure. The cumulative impact would be *less than significant and the contribution of VCIP projects would not be considerable*.

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Exposure of People or Structures to Post-Fire Flooding or Landslides

As discussed under Impact WF-5, most of the Plan Area is virtually level and has no potential for landslides. A few small areas at the western edge of the Plan Area along the base of the foothills have a maximum slope of four percent. Based on USGS mapping of landslide susceptibility, these areas are mapped as having a low susceptibility to landslides. The potential solar and energy storage projects located in DFAs in these moderately sloping areas. These potential VCIP projects would include stormwater detention basins that would act as debris basins in the event of post-fire flooding or debris flows. Additionally, given that lands downslope of these DFA areas generally consist of cultivated fields with no structures, the potential for exposure of people or structures to risks of flooding or landslides would not be substantial.

Most of the pending, approved, and completed cumulative projects in the VCIP Plan Area and vicinity are in the flat valley area east of I-5. These lands are not susceptible to landslides. Any post-fire stormwater would be retained within each site. The four cumulative projects located west of I-5 are also located on essentially flat sites with no landslide susceptibility or potential to generate runoff that could cause flooding downstream.

Regarding outside transmission corridors, approximately half of the corridors would traverse mountainous areas with a moderate to high susceptibility to landslides. The transmission towers would be sited and designed based on geotechnical studies and would avoid known or potential landslide areas. Vegetation clearance would be confined to the immediate vicinity of the towers, with the exposed soils revegetated after construction. The general plans of the counties traversed by the transmission corridors would allow rural development in the vicinity of the transmission lines; however, such construction would be required to avoid the toes of steep slopes and areas subject to flooding or landslides. Such construction would also require geotechnical studies to avoid or mitigate areas of unstable slopes. The potential for post-fire flooding, slope instability, or landslides would be avoided or substantially reduced for both the outside transmission projects and other cumulative development in the vicinity. Therefore, construction and operation of the outside transmission lines would not combine with the effects of new rural development in the vicinity to cumulatively result in the exposure of people or structures to post-fire flooding or landslides.

Construction, operation, and decommissioning of potential VCIP projects would not combine with other cumulative projects to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The cumulative impact would be *less than significant and the contribution of VCIP projects would not be considerable*.

4.18.4. References – Wildfire

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