EXECUTIVE SUMMARY

This Program Environmental Impact Report (PEIR) evaluates the environmental impacts of the proposed California Vegetation Treatment Program (CalVTP). It has been prepared according to the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Section 15000 et seq.) under the direction of the California Board of Forestry and Fire Protection (Board) and in cooperation with the California Department of Forestry and Fire Protection (CAL FIRE). The Board is the CEQA lead agency. CAL FIRE, a CEQA responsible agency for implementing the CalVTP, has the primary responsibility for preventing and suppressing fires within the State Responsibility Area (SRA) (PRC Sections 4113 and 4125). Additionally, many local, regional, and state agencies with land ownership or land management responsibilities in the SRA could implement proposed CalVTP vegetation treatments and use this PEIR for CEQA compliance.

This summary is provided in accordance with State CEQA Guidelines Section 15123. It presents (1) a summary description of the proposed CalVTP, (2) a synopsis of significant environmental impacts and feasible mitigation measures (Table ES-1), (3) an overview of the alternatives evaluated and a conclusion regarding identification of an environmentally superior alternative (4) a discussion of the areas of controversy and issues to be resolved associated with the proposed program, and (5) a description of the intended uses of this PEIR.

INTRODUCTION

California is experiencing a wildfire crisis. As noted in a report of the Governor's Wildfire Strike Force (2019):

> Climate change has created a new wildfire reality for California. The state's fire season is now almost year round. More than 25 million acres of California wildlands are classified as under very high or extreme fire threat. Approximately 25 percent of the state's population – 11 million people – lives in that high-risk area.

The effects of climate change and decades of fire suppression have been manifested on the landscape. Wildfire risk levels have been exacerbated by the location of developed land uses and communities in the high hazard areas. In the last several decades, more than 75 percent of forested areas and other woody vegetation types burned less frequently than historic averages, resulting in the buildup of fire fuel (CAL FIRE 2017). Drought conditions, low snowpack accumulation, and extreme temperature highs have also been prevalent in the last decade and are expected to worsen as climate change continues to alter landscapes and local climates (NOAA 2018, IPCC 2018). Numerous communities are located in the wildland-urban interface (WUI) within very high fire hazard severity zones (VHFHSZs). A survey by media firm, McClatchy, overlaying the hazard zone maps onto 2010 census data, identified 75 towns and cities with populations over 1,000 that were entirely or almost entirely (at least 90 percent) within VHFHSZs (Reese 2019).

These conditions have resulted in the largest, most destructive, and deadliest wildfires on record in California history, all occurring in 2018 and a growing total number of fires and acreage burned. Since 2010, the number of wildfires occurring annually has been increasing, as has the number of acres burned. Much of this increase in acreage, especially in 2017 and 2018, is the result of record-setting fires primarily driven by wind, such as the Thomas and Northern California wildfires (2017) and the Camp and the Mendocino Complex fires (2018). However, destructive fires primarily driven by wind are a small proportion of the thousands of fires that occur every year that do not reach catastrophic levels. Fires driven by topography and those that move more slowly through the landscape, as well as primarily wind-driven fires that have slowed, are those that might be further slowed or stopped entirely by a vegetation treatment implemented under the CalVTP.

The proposed CalVTP directs implementation of vegetation treatments within the SRA to serve as one component of the state's range of actions to reduce the risk of loss of lives and property, reduce fire suppression costs, and protect natural resources from wildfire. The Board acknowledges that vegetation treatments, alone, will not solve the wildfire crisis. The state's response to the wildfire crisis involves multi-faceted strategies. The Board also acknowledges that,

given the current severity of fire hazards in the SRA, vegetation treatments may not be able to slow or halt extreme wind-driven fires. However, most fires that occur within the state are not highly wind driven and the proposed vegetation treatments can help slow and suppress them. Vegetation treatments can also play a valuable role in containing the more extreme fires, when weather conditions shift, wind subsides, and fire intensity decreases.

SUMMARY DESCRIPTION OF THE CalVTP

The Board is mandated to regulate forestry activities within the SRA and develop policies and regulations that contribute to fire prevention and recovery efforts (PRC Section 740). The Board's proposed discretionary action needing CEQA compliance is approval of the CalVTP. After approval, implementation of the CalVTP would consist of vegetation treatment activities carried out by CAL FIRE on private or public land, by public agencies and organizations funded by CAL FIRE grants, or potentially by public agencies that own and/or manage land within the treatable landscape.

This CalVTP PEIR addresses the following:

- Expansion of CAL FIRE's vegetation treatment activities to reach a total treatment acreage target of approximately 250,000 acres per year to contribute to the achievement of the 500,000 annual acres of treatment on non-federal lands expressed in Executive Order (EO) B-52-18, signed by former Governor Jerry Brown in May 2018. The expanded target would be a substantial increase compared both to current activity (recently averaging approximately 33,000 acres per year) and to the level proposed in the 2017 VTP Draft PEIR (i.e., 60,000 acres per year).
- A project-specific implementation approach for streamlining CEQA review of later site-specific, vegetation treatment projects consistent with the CalVTP and this PEIR, in accordance with procedures described in State CEQA Guidelines Section 15168. The streamlined CEQA review approach would document how a project's environmental effects are covered and which feasible mitigation measures from the CalVTP PEIR are incorporated. This would include evaluation of whether later activities and impacts of site-specific vegetation treatment projects are within the scope of the CalVTP and the PEIR. A "within the scope" finding for later activities would facilitate an increase in the pace and scale of project approvals in a manner that includes environmental protections in compliance with CEQA. Where later vegetation treatment projects do not qualify for a "within the scope" finding, additional CEQA documentation would be prepared.

Program Objectives

The statement of objectives below describes the underlying purposes of the CalVTP and expresses the role of vegetation treatment in implementing state policies and plans for wildfire risk reduction, greenhouse gas (GHG) reduction, and management of natural and working lands. The objectives of the CalVTP are to:

1. serve as the vegetation management component of the state's range of actions underway to reduce risks to life, property, and natural resources by managing the amount and continuity of hazardous vegetative fuels that promote wildland fire consistent with *California's 2018 Strategic Fire Plan* (Board and CAL FIRE 2018);
2. substantially increase the pace and scale of vegetation treatments to contribute to achieving a statewide total of at least 500,000 acres per year on non-federal lands, consistent with the former Governor's EO B-52-18, which results in a CalVTP target up to 250,000 acres per year after considering other types and areas of vegetation treatments;
3. increase the use of prescribed burning as a vegetation treatment tool, consistent with the provisions of Senate Bill 1260, Statutes of 2018, and PRC Section 4483(a);
4. contribute to meeting California's GHG emission goals by managing forests and other natural and working lands as a net carbon sink, consistent with the *California Forest Carbon Plan* (Forest Climate Action Team 2018), *California's 2017 Climate Change Scoping Plan* (CARB 2017), *Fire on the Mountain: Rethinking Forest Management*

in the Sierra Nevada (Little Hoover Commission 2018), and *California 2030 Natural and Working Lands Climate Change Implementation Plan* (CalEPA et al. 2019); and

5. improve ecosystem health in fire-adapted habitats by safely mimicking the effects of a natural fire regime, considering historic fire return intervals, climate change, and land use constraints.

Treatable Landscape

Appropriate areas within which to implement proposed vegetation treatments were identified by first dividing the SRA into vegetation types from the California Wildlife Habitat Relationship (CWHR) system and excluding those vegetation types with negligible wildfire risks (e.g., wet meadow, estuarine). Agricultural CWHR vegetation types were also excluded because agricultural land is generally outside the SRA.

Using this method, 20.3 million acres within the 31 million-acre SRA were identified that may be appropriate for vegetation treatments as part of the CalVTP; this area is called the "treatable landscape" in this PEIR. The proposed target of 250,000 annual acres of treatment would occur within the 20.3 million acres of treatable landscape.

Proposed Vegetation Treatments

Vegetation treatment at the landscape scale is focused on reducing the likelihood of a ground fire increasing in intensity and helping fire responders more easily contain a fire. This is accomplished by modifying fire behavior through strategic removal or modification of vegetation (Finney and Cohen 2003; Graham et al. 2004). By implementing the proposed treatment types, the CalVTP would strategically modify portions of the landscape to reduce losses from and improve resiliency to wildfire. The following treatment types are proposed:

- **Wildland-Urban Interface Fuel Reduction:** Located in WUI-designated areas, fuel reduction would generally consist of strategic removal of vegetation to prevent or slow the spread of non-wind driven wildfire between structures and wildlands, and vice versa.
- **Fuel Breaks:** In strategic locations, fuel breaks create zones of vegetation removal and ongoing maintenance, often in a linear layout, that support fire suppression by providing responders with a staging area or access to a remote landscape for fire control actions. While fuel breaks can passively interrupt the path of a fire or halt or slow its progress, this is not the primary goal of constructing fuel breaks.
- **Ecological Restoration:** Generally outside of the WUI in areas that have departed from the natural fire regime as a result of fire exclusion, ecological restoration would focus on restoring ecosystem processes, conditions, and resiliency by moderating uncharacteristic wildland fuel conditions to reflect historic vegetative composition, structure, and habitat values.

The WUI fuel reduction, fuel break, and ecological restoration treatment types would be implemented using various treatment "activities" that may be applied singularly or in combination:

- **Prescribed Burning**: Includes pile burning (prescribed burning of piles of vegetative material to reduce fuel and/or remove biomass following treatment) and broadcast burning (prescribed burning to reduce fuels over a larger area or restore fire resiliency in target fire-adapted plant communities; would be conducted under specific conditions related to fuels, weather, and other variables).
- **Mechanical Treatment**: Use of motorized equipment to cut, uproot, crush/compact, or chop existing vegetation
- **Manual Treatment**: Use of hand tools and hand-operated power tools to cut, clear, or prune herbaceous or woody species
- **Prescribed Herbivory**: Use of domestic livestock to reduce a target plant population thereby reducing fire fuels or competition of desired plant species
- **Herbicides**: Chemical application designed to inhibit growth of target plant species

Standard Project Requirements

Standard project requirements (SPRs) are presented as part of the proposed program to avoid and minimize environmental impacts and comply with applicable laws and regulations. SPRs will be incorporated into later vegetation treatments under the CalVTP as a standard part of treatment design and implementation. SPRs are the product of coordinated interagency efforts to integrate environmental protection into a comprehensive approach to reduce wildfire risk statewide through vegetation treatment. These SPRs provide the benefit of being mutually supported and predictable, such that they would be implemented consistently to achieve environmental protection.

ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

This PEIR has been prepared to evaluate the physical environmental effects of the proposed CalVTP. Table ES-1, presented at the end of this chapter, provides a summary of the environmental impacts potentially resulting from implementation of the proposed CalVTP. The table identifies the level of significance of the impact before mitigation, mitigation measures proposed for the program, and the level of significance of the impact after implementation of the mitigation measures.

Significant and Unavoidable Impacts

The majority of qualifying treatments under the CalVTP would result in less-than-significant impacts or impacts that could be reduced to less than significant with implementation of feasible mitigation measures. In some cases, however, even though the forecasted outcomes would be less than significant or potentially beneficial, because of uncertainty related to future predictions, the PEIR notes for CEQA purposes of good-faith disclosure that the impacts may be significant and unavoidable notwithstanding the expected less than significant or potentially beneficial predictions. Uncertainties relate to: predicting future wildfire occurrence and severity after treatments, evolving research and development related to carbon sequestration rates, ongoing tribal consultation, and the solid organic waste processing industry trends for handling woody biomass. Below is a summary listing of potentially significant and unavoidable impacts; it is important to review the impact discussions in Chapters 3 and 4 of this PEIR to understand the full context of the impact significance determinations.

Implementation of the CalVTP could result in the following potentially significant and unavoidable environmental impacts after implementation of feasible mitigation measures:

Impacts Forecasted to Be Significant and Unavoidable

- Impact AES-3: Result in Long-Term Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from the Non-Shaded Fuel Break Treatment Type
- Impact CUL-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources or Subsurface Historical Resources

Impacts Forecasted to Be Less Than Significant or Beneficial, But Noted as Potentially Significant and Unavoidable Because of Future Uncertainties

- Impact AQ-1: Generate Emissions of Criteria Air Pollutants and Precursors During Treatment Activities That Would Exceed CAAQS or NAAQS
- Impact AQ-4: Expose People to Toxic Air Contaminants Emitted by Prescribed Burns and Related Health Risk
- Impact AQ-6: Expose People to Objectionable Odors from Smoke during Prescribed Burning
- Impact BIO-2: Substantially Affect Special-Status Wildlife (Bumble Bee) Species Either Directly or Through Habitat Modifications
- Impact CUL-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource

- Impact GHG-2: Generate GHG Emissions through Treatment Activities
- Impact TRAN-3: Result in a Net Increase in VMT for the Proposed CalVTP
- Impact UTIL-2: Generate Solid Waste in Excess of State Standards or Exceed Local Infrastructure Capacity

Cumulative impacts for the issues listed above would also be significant and unavoidable (considerable contributions to a cumulatively significant impact) as a result of implementation of the CalVTP.

ALTERNATIVES TO THE PROPOSED CalVTP

Agencies, organizations, and individuals provided suggestions for alternatives during interagency consultation and review of the Notice of Preparation (NOP). Alternatives were evaluated for consideration in the PEIR if they were determined to: (1) accomplish all or most of the project objectives, (2) be potentially feasible (from economic, legal, regulatory, and technological standpoints), and (3) avoid or substantially lessen any significant effects of the proposed program. Alternatives that meet these evaluation criteria are evaluated in the PEIR, and are listed as follows:

- No Program Alternative, which assumes vegetation treatments would continue to be implemented through existing plans, policies, and operations;
- Alternative A: Reduced Scale of Treatments, which would treat up to 60,000 acres per year with a combination of WUI fuel reduction, fuel break, and ecological restoration projects across the entire treatable landscape;
- Alternative B: WUI Fuel Reduction Only, which would seek to treat approximately 250,000 acres per year entirely within the WUI, encompassing approximately 10.1 million acres of the treatable landscape;
- Alternative C: Modified WUI Fuel Reduction and Fuel Breaks, which would seek to treat approximately 250,000 acres per year through WUI fuel reduction and fuel breaks without the use of prescribed burning in chaparral and coastal sage scrub vegetation types;
- Alternative D: No Prescribed Burning Treatments, which would seek to treat approximately 250,000 acres per year with a combination of WUI fuel reduction, fuel break, and ecological restoration projects without the use of prescribed burning; and
- Alternative E: No Herbicide Treatments, which would seek to treat approximately 250,000 acres per year with a combination of WUI fuel reduction, fuel break, and ecological restoration projects without the use of herbicides.

Those alternatives that do not meet the criteria identified above for detailed evaluation and are dismissed from further consideration in the PEIR are listed as follows:

- Non-Vegetation Management Alternatives;
- Defensible Space Focus;
- Electric Utility Focus;
- Alternatives Evaluated in the 2017 Draft VTP PEIR; and
- Alternatives Dismissed in the 2017 Draft VTP PEIR:
  - reduced acreage,
  - Highly Constrained – WUI and VHFHSZ,
  - Limiting Treatment to Areas with High Incidence of Wildfires,
  - High Acres in the WUI Only,
  - Focusing on Areas of Historical Use of Treatments,
  - 1,000 Foot WUI and Fuel Break Maintenance Only, and
  - Fire Return Interval Departure.

Environmentally Superior Alternative

With each alternative, there would be environmental tradeoffs; that is, impacts on certain resource areas from an alternative would increase while others would decrease relative to the proposed program. Additionally, each alternative would result in significant and unavoidable impacts. The proposed program would achieve all the basic program objectives but would result in potentially significant impacts and require the application of mitigation to reduce some, but not all, of the significant impacts to a less-than-significant level. The alternatives, particularly Alternative B: WUI Fuel Reduction Only and Alternative D: No Prescribed Burning Treatments, would result in fewer potentially significant impacts for some resources and exacerbate impacts for other resources, but would not achieve the basic program objectives to the same extent as the proposed program.

In light of these tradeoffs among the alternatives and the proposed program, none of the alternatives clearly stands out as environmentally superior. Identification of the environmentally superior alternative is, therefore, not an objective choice based on quantifiable criteria, but rather, an exercise of discretion in balancing environmental priorities among potential impacts in relation to the extent to which the alternative would meet the program objectives. If the key criterion for identifying the environmentally superior alternative is avoiding significant and unavoidable impacts and priority is given to issues related to human health, Alternative D would become the environmentally superior alternative, because it would avoid a significant and unavoidable air quality impact of the proposed program related to short-term exposure of people to toxic air contaminants during prescribed burning.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

The NOP for the CalVTP PEIR was distributed on January 30, 2019, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the project. The Board held public scoping meetings on February 11 and 19, and on March 18, 2019 to provide information on the proposed CalVTP and solicit public input on the scope and content of the PEIR.

The following environmental concerns and issues were expressed most frequently during the scoping process:

- Efficacy of wildland vegetation treatments at reducing fire risk in communities, including from wind-driven fires
- Air quality and public health impacts from prescribed burning
- Impacts on climate change and carbon sequestration from removal of vegetation by vegetation treatments as well as wildfire
- Cumulative impacts on chaparral and coastal sage scrub vegetation from vegetation treatments, prescribed burning, and wildfires
- Impacts on biological resources from treatment activities
- The process for environmental review of later treatment activities under the CalVTP
- Suggestions for alternatives to the CalVTP

These issues are addressed in this PEIR. A summary of comments received on the NOP and the location where each is addressed in the PEIR are presented in Appendix A.

Consultation is ongoing pursuant to PRC Section 21080.3 regarding the potential for effects on tribal cultural resources. The consultation process may identify potentially affected tribal cultural resources or result in refinements to mitigation measures. To account for this uncertainty while consultation is actively underway, this PEIR identifies impacts on tribal cultural resources as potentially significant, notwithstanding the likelihood that consultation may result in an agreement among the parties to measures that mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource.

INTENDED USES OF THIS PEIR

According to the State CEQA Guidelines (Section 15064[f][1]), preparation of an EIR is required whenever a project may result in a significant environmental impact. This document functions as a Program EIR in accordance with State CEQA Guidelines Section 15168(c) for streamlining later activities. According to Section 15168 of the State CEQA Guidelines, a Program EIR may be prepared on a series of actions that can be characterized as one large project and are related to, among other things, the issuance of general criteria to govern the conduct of a continuing program or individual activities carried out under the same authorizing statutory or regulatory authority, and having generally similar environmental effects that can be mitigated in similar ways.

For the purposes of this PEIR a "project proponent" would be CAL FIRE or another public agency funded by CAL FIRE grants or with land ownership and/or management responsibilities in the treatable landscape that is seeking to implement vegetation treatments consistent with the CalVTP, using the PEIR for CEQA compliance. CAL FIRE or other project proponents must evaluate the later activities associated with each vegetation treatment project to determine whether such activities have been analyzed in this PEIR. Such evaluations must ascertain whether these future vegetation treatment projects are consistent with the activities contained in the CalVTP and would have effects that were analyzed in the PEIR. If the project proponent finds that the impacts were analyzed in the PEIR and no new or substantially more severe significant effects could occur or no new mitigation measures would be required for a subsequent treatment project, the project can be found to be within the scope of this PEIR. In this circumstance, no additional CEQA documentation would need to be prepared or publicly circulated (State CEQA Guidelines Section 15168[c][2] and [4]). The documentation used to substantiate the "within the scope" finding would provide the substantial evidence required to reach that conclusion. For the CalVTP, this documentation would be completion of the Project-specific Analysis checklist and provision of supporting studies (see Appendix PD-3 of this PEIR). The project proponent may act on the proposed later activity using this documentation and the PEIR for CEQA compliance purposes. If the later activity is approved, the project proponent would file a Notice of Determination.

Under this CEQA compliance approach, a project proponent must incorporate all standard project requirements relevant to the proposed activity and all feasible mitigation measures from the PEIR into the later activity, as needed, to address significant or potentially significant effects on the environment. A "within the scope" finding for later activities would facilitate an increase in the pace and scale of project approvals in a manner that includes environmental protections. If a proposed project is not within the scope of this CalVTP PEIR, then the project proponent may serve as a lead agency in the preparation of additional environmental documentation that accompanies the PEIR for CEQA compliance or in the conduct of a separate, independent CEQA review and documentation process. If a later EIR is prepared, it could be limited in its scope to the new or substantially more severe significant impact and could require additional CEQA documentation, as directed by State CEQA Guidelines Sections 15162. 15163, and 15168. Pursuant to State CEQA Guidelines Section 15168(d), a later negative declaration could be prepared if the new impact would be less than significant or mitigated negative declaration could be prepared if the new impact could be clearly mitigated to less than significant. If a new or substantially more severe significant effect could not be clearly mitigated to less than significant, an EIR would be prepared that would focus on the new or substantially more severe significant impact(s).

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
Aesthetics and Visual Resources			
Impact AES-1: Result in Short-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from Treatment Activities Varying degrees of temporary degradation of public views would result during active implementation of vegetation treatment activities under the proposed CalVTP. Herbicide application and prescribed herbivory would occur intermittently and move throughout a project area. These types of activities would not block any views, dominate a viewshed, or significantly disrupt views from a scenic vista or state scenic highway. Equipment and vehicles associated with manual and mechanical treatments and prescribed burning could be visible to public viewers at scenic vistas, along a state scenic highway, or other public view points. However, activities would be temporary, lasting from 1 week to 6 months, and implementation of SPR AES-2 would avoid and minimize visual impacts from the presence of treatment equipment. In addition, smoke from prescribed burns would not result in substantial short-term aesthetic impacts, because burning would temporary, lasting up to 1 week but typically only 1 day, and project proponents would be required to prepare and adhere to a smoke management plan (SMP) (SPR AQ-2) and a Burn Plan (SPR AQ-3) which prescribe the conditions under which prescribed burning can occur to reduce the generation and visibility of smoke. Therefore, this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact AES-2: Result in Long-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from WUI Fuel Reduction, Ecological Restoration, or Shaded Fuel Break Treatment Types Long-term effects to aesthetics would occur from implementing WUI fuel reduction, ecological restoration, and shaded fuel break treatment types in the treatable landscape. Because ecological restoration would be designed to improve habitat quality and create a landscape appearance closer to native conditions, it would result in long-term beneficial visual impacts. WUI fuel reduction activities would reduce vegetation near communities. However, it would not be significantly noticeable because sufficient vegetation would remain and could aid in the visual transition from wildlands to urban environment. Prescribed burning in the grass	LTS	No mitigation is required.	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
fuel type would result in the most substantial visual change as grasses would turn a dark charcoal/black color directly following prescribed burning. However, grasses would regrow during the next growing season(s), and wildfire and prescribed burning currently occur within the treatable landscape, thus burned vegetation of all types is occasionally visible. Requirements from SPR AD-4 and SPR REC-1 would be incorporated into prescribed burning projects and ensure notification to the public prior to the commencement of burning operations. In the case of shaded fuel breaks, because not all of the existing vegetation would be cleared, and large trees would remain, vividness, intactness, and unity of views would remain, and their presence would not substantially affect views from a scenic vista or from a state scenic highway. Requirements from SPR AES-1 and SPR AES-3 would be incorporated into vegetation treatments to break up or screen linear edges of a clearing and screen views from public view points as feasible. Therefore, these treatment types would not result in a long-term or substantial degradation of a scenic vista, substantially damage resources in a state scenic highway, or degrade the existing visual character and quality of a site. This impact would be less than significant.			
Impact AES-3: Result in Long-Term Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from the Non-Shaded Fuel Break Treatment Type Implementation of non-shaded fuel breaks would remove all of the vegetation within a treatment area and could be visible from scenic vistas, state scenic highways, or other public view points. Because non-shaded fuel breaks remove all vegetation, this treatment type could lead to a long-term adverse visual change in the landscape by resulting in a contrasting linear element in an otherwise natural environment. This change would constitute substantial degradation of a scenic vista or the visual character and quality of public views, or substantial damage to scenic resources within a state scenic highway to the extent a non-shaded fuel break is visible to the public. This would be a potentially significant impact.	PS	**Mitigation Measure AES-3: Conduct Visual Reconnaissance for Non-Shaded Fuel Breaks and Relocate or Feather and Screen Publicly Visible Non-Shaded Fuel Breaks** The project proponent will conduct a visual reconnaissance of the treatment area prior to implementing non-shaded fuel breaks to observe the surrounding landscape and determine if public viewing locations, including scenic vistas, public trails, and state scenic highways, have views of the proposed treatment area. If none are identified, the non-shaded fuel break may be implemented without additional visual mitigation If the project proponent identifies public viewing points, including heavily used scenic vistas, public trails, recreation areas, and state scenic highways with lengthy views (i.e., longer than a few seconds) of a proposed non-shaded fuel break treatment area, the project proponent will, prior to implementation, attempt to identify any feasible change in location of the fuel break to reduce its visibility from public viewpoints. If no feasible location changes exist that would reduce impacts to public viewers and achieve the intended wildfire risk reduction objectives of the proposed non-shaded fuel break, the project proponent will implement, where	SU

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		feasible, a shaded fuel break rather than a non-shaded fuel break, if the shaded fuel break would achieve the intended wildfire risk reduction objectives. With the shaded fuel break, the project proponent will thin and feather adjacent vegetation to break up the linear edges of the fuel break and strategically preserve vegetation at the edge of the fuel break, as feasible, to help screen public views and minimize the contrast between the fuel break and surrounding vegetation.	
Agricultural and Forestry Resources			
Impact AG-1: Directly Result in the Loss of Forest Land or Conversion of Forest Land to a Non-Forest Use or Involve Other Changes in the Existing Environment Which, Due to Their Location or Nature, Could Result in Conversion of Forest Land to Non-Forest Use The WUI fuel reduction, ecological restoration and non-shaded fuel break treatment types would inherently retain some vegetation within treatment areas. Establishing a non-shaded fuel break would require complete removal of vegetation within the limited area of the fuel break. Untreated vegetation surrounding the fuel break within forest land would remain intact. Although, treatment activities would alter forest land through vegetation removal, the area would generally support 10 percent of native tree cover thereby maintaining consistency with the definition of forest land as defined by PRC Section 12220(g). Treatment activities under the CalVTP would not result in the loss of forest land or conversion of forest land to a non-forest use. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Air Quality			
Impact AQ-1: Generate Emissions of Criteria Air Pollutants and Precursors during Treatment Activities that Would Exceed CAAQS or NAAQS and Conflict with Regional Air Quality Plans Emissions of criteria air pollutants and precursors generated by mechanical and manual treatments, prescribed herbivory, herbicide application, and prescribed burns under the CalVTP would likely exceed air district–established mass emission thresholds and, therefore, result in, or contribute to, the nonattainment status with respect to the NAAQS and CAAQS in one or more air basins. In addition, treatment activity–related emissions could result in, or contribute to, localized exceedances of NAAQS and CAAQS for CO, PM_{10}, and $PM_{2.5}$ in areas where people reside and	PS	**Mitigation Measure AQ-1: Implement On-Road Vehicle and Off-Road Equipment Exhaust Emission Reduction Techniques** Where feasible, project proponents will implement emission reduction techniques to reduce exhaust emissions from off-road equipment. It is acknowledged that due to cost, availability, and the limits of current technology, there may be circumstances where implementation of certain emission reduction techniques will not feasible. The project proponent will document the emission reduction techniques that will be applied and will explain the reasons other techniques that could reduce emissions are infeasible.	SU

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
work, thereby also conflicting with the air quality planning efforts of regional air districts, including those that comprise the SIP. This could result in health complications experienced by receptors, which, if it occurred, would be a potentially significant impact.		Techniques for reducing emissions may include, but are not limited to, the following: ▶ Diesel-powered off-road equipment used in construction will meet EPA's Tier 4 emission standards as defined in 40 CFR 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. Tier 3 models can be used if a Tier 4 version of the equipment type is not yet produced by manufacturers. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. Prior to implementation of treatment activities, the project proponent will demonstrate the ability to supply the compliant equipment. A copy of each unit's certified tier specification or model year specification and operating permit (if applicable) will be available upon request at the time of mobilization of each unit of equipment. ▶ Use renewable diesel fuel in diesel-powered construction equipment. Renewable diesel fuel must meet the following criteria: ▪ meet California's Low Carbon Fuel Standards and be certified by CARB Executive Officer; ▪ be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., non-petroleum sources), such as animal fats and vegetables; ▪ contain no fatty acids or functionalized fatty acid esters; and ▪ have a chemical structure that is identical to petroleum-based diesel and complies with American Society for Testing and Materials D975 requirements for diesel fuels to ensure compatibility with all existing diesel engines. ▶ Electric- and gasoline-powered equipment will be substituted for diesel-powered equipment. ▶ Workers will be encouraged to carpool to work sites, and/or use public transportation for their commutes. ▶ Off-road equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NO_X and PM.	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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Impact AQ-2: Expose People to Diesel Particulate Matter Emissions and Related Health Risk Because of the short duration of treatment activities and because treatment activity would not take place near the same people for an extended period of time, diesel PM generated by treatment activities would not expose any person to an incremental increase in cancer risk greater than 10 in one million or a Hazard Index of 1.0 or greater. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact AQ-3: Expose People to Fugitive Dust Emissions Containing Naturally Occurring Asbestos and Related Health Risk Treatment activities implemented under the CalVTP could involve ground disturbing activities in areas where NOA is present. However, multiple SPRs would limit exposure of people to NOA-containing fugitive dust emissions generated by treatment activities implemented under the CalVTP. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact AQ-4: Expose People to Toxic Air Contaminants Emitted by Prescribed Burns and Related Health Risk Prescribed burns conducted under the CalVTP could result in the short-term exposure of people to concentrations of TACs and associated levels of acute health risk with a Hazard Index greater than 1.0. This would be a potentially significant impact.	PS	Additional measures are not feasible.	SU
Impact AQ-5: Expose People to Objectionable Odors from Diesel Exhaust While the use of diesel-powered equipment during treatment activities performed under the CalVTP could result in temporary emissions of odorous diesel exhaust, it is not anticipated that this the levels of diesel exhaust would be excessive, nor would it affect a substantial number of people. This would be a less-than-significant impact.	LTS	No mitigation is required.	LTS
Impact AQ-6: Expose People to Objectionable Odors from Smoke During Prescribed Burning Prescribed burns conducted under the CalVTP could result in the short-term exposure of a substantial number of people to odorous smoke. This would be a potentially significant impact.	PS	Additional measures are not feasible.	SU

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
Archaeological, Historical, and Tribal Cultural Resources			
Impact CUL-1: Cause a Substantial Adverse Change in the Significance of Built Historical Resources Vegetation treatment under the CalVTP could occur on lands that contain built historical resources. Implementation of SPRs CUL-1, CUL-6, and CUL-7, would avoid any substantial adverse change to any built historical resources. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact CUL-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources or Subsurface Historical Resources Vegetation treatment under the CalVTP could occur on lands that contain resources that may qualify as unique archaeological resources or subsurface historical resources. The CalVTP primarily involves treatment activities that either require no soil disturbance or very shallow soil disturbance; however, it is possible that unique archaeological or subsurface historical resources would be disturbed during treatment activities. SPRs CUL-1 through CUL-5 and SPR CUL-7 require a records search, pre-field research, an archaeological survey, coordination with Native American groups, worker training to recognize sensitive cultural resources, and avoiding or protecting known resources. Despite implementation of these SPRs, unknown unique archaeological resources or subsurface historical resources could be inadvertently damaged during treatment activities. This would be a potentially significant impact.	PS	**Mitigation Measure CUL-2: Protect Inadvertent Discoveries of Unique Archaeological Resources or Subsurface Historical Resources** If any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, are discovered during ground-disturbing activities, all ground-disturbing activity within 100 feet of the resources will be halted and a qualified professional archaeologist or CAL FIRE archeological trained Registered Professional Forester will assess the significance of the find. The qualified archaeologist will work with the project proponent to develop a primary records report that will comply with the current "Archaeological Review Procedures for CAL FIRE Projects" or equivalent state or local agency procedures, if applicable. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan will be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find constitutes a unique archaeological resource, subsurface historical resource, or tribal cultural resource), the archaeologist will work with the project proponent to develop appropriate procedures to protect the integrity of the resource. Procedures could include preservation in place (which is the preferred manner of mitigating impacts to archaeological sites), archival research, subsurface testing, or recovery of scientifically consequential information from and about the resource. Any find will be recorded standard DPR Primary Record forms (Form DPR 523) will be submitted to the appropriate regional information center.	SU
Impact CUL-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource The Board sent letters to 12 Native American tribes on February 9, 2019, notifying each that the PEIR was being prepared under CEQA, as required by PRC 21080.3.1. Four tribes requested initiation of tribal consultation. Tribal consultation with the	PS	**Mitigation Measure CUL-3: Complete Tribal Consultation (PRC Section 21080.3.1) and Avoid Potential Effects on Tribal Cultural Resources** The Board of Forestry and Fire Protection will complete tribal consultation pursuant to PRC Section 21080.3.1	SU

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San Manuel Band of Mission Indians is ongoing and could result in the identification of tribal cultural resources as described under PRC Section 21074. Consultation is under way but not yet been completed. Tribal cultural resources may be identified within the treatable landscape during consultation and could be affected by treatments implemented under the proposed CalVTP. This would be a potentially significant impact.		If no tribal cultural resource is identified during consultation, no further mitigation is required. If the project proponent determines that a treatment may cause a substantial adverse change to a tribal cultural resource, and measures to protect the resource are not otherwise identified in the consultation process, provisions under PRC Section 21084.3(b) describe mitigation measures that may avoid or minimize the significant adverse impacts. Examples include: 1. Avoidance and preservation of the resources in place, including, but not limited to, designing the treatment to avoid the resources and protect the cultural and natural context. 2. Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following: A. Protecting the cultural character and integrity of the resource B. Protecting the traditional use of the resource C. Protecting the confidentiality of the resource.	
Impact CUL-4: Disturb Human Remains Prehistoric or historic-era marked or un-marked human interments are present throughout California, including the treatable landscape. Ground-disturbing vegetation treatment activities could uncover previously unknown human remains. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 would avoid disturbance. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Biological Resources			
Impact BIO-1: Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications Vegetation treatment activities could result in direct removal or destruction, or indirect death or reduced vigor of special-status plants through habitat modifications. Implementation of SPRs BIO-1, BIO-2, BIO-7, and BIO-9 require special-status plants to be identified prior to treatment activities, Worker Environmental Awareness Program (WEAP) training for workers, and actions to prevent the spread of invasive plants that could threaten special-status plant populations. While SPRs would minimize impacts, treatment activities could	PS	**Mitigation Measure BIO-1a: Avoid Loss of Special-Status Plants Listed under ESA or CESA** If listed plants are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will avoid and protect these species by establishing a no-disturbance buffer around the area occupied by listed plants and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway), exceptions to this requirement are listed later in this measure. The no-disturbance buffers will generally be a minimum of 50 feet from listed plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller	LTSM

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inadvertently damage or destroy special-status plants and adversely modify their habitat resulting in reduced growth and reproduction or death and loss of special-status plant occurrences. This would be a potentially significant impact.		buffer will be sufficient to avoid killing or damaging listed plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate buffer size will be determined based on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. For example, paint-on or wicking application of herbicides to invasive plants may be implemented within 50 feet of listed plant species without posing a risk, especially if the listed plants are dormant at the time of application. For species listed under ESA or CESA, if the project proponent cannot avoid loss by implementing no-disturbance buffers, the project proponent will implement Mitigation Measure BIO-1c. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist, in consultation with CDFW and USFWS, as appropriate depending on species status and location, that the listed plants would benefit from treatment in the occupied habitat area even though some of the listed plants may be lost during treatment activities. If it is determined that treatment activities would be beneficial to listed plants, no compensatory mitigation for loss of individuals will be required. **Mitigation Measure BIO-1b: Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA** If non-listed special-status plant species (i.e., species not listed under ESA or CESA, but meeting the definition of special-status as stated in Section 3.6.1 of the Program EIR) are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will implement the following measures to avoid loss of individuals and maintain habitat function of occupied habitat: ▶ Physically avoid the area occupied by the special-status plants by establishing a no-disturbance buffer around the area occupied by species and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The no-disturbance buffers will generally be a minimum of 50 feet from special-status plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid loss of or damaging	

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		to special-status plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate size and shape of the buffer zone will be determined by a qualified RPF or botanist and will depend on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. ▶ Treatments may be conducted within this buffer if the potentially affected special-status plant species is a geophytic, stump-sprouting, or annual species, and the treatment can be conducted outside of the growing season (e.g., after it has completed its annual life cycle) or during the dormant season using only treatment activities that would not damage the stump, root system or other underground parts of special-status plants or destroy the seedbank. ▶ Treatments will be designed to maintain the function of special-status plant habitat. For example, for a fuel break proposed in treatment areas occupied by special-status plants, if the removal of shade cover would degrade the special-status plant habitat despite the requirement to physically or seasonally avoid the special-status plant itself, habitat function would be diminished and the treatment would need to be modified or precluded from implementation. A qualified RPF or botanist with knowledge of the special-status plant species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment would not maintain habitat function of the special-status plant habitat (i.e., the habitat would be rendered unsuitable) or because the loss of special-status plants would substantially reduce the number or restrict the range of a special-status plant species. If the project proponent determines the impact on special-status plants would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status plants or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-1c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants would benefit from	

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		treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required. **Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants** If significant impacts on listed or non-listed special-status plants cannot feasibly be avoided as specified under the circumstances described under Mitigation Measures BIO-1a and 1b, the project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant impacts that require compensatory mitigation and describes the compensatory mitigation strategy being implemented and how unavoidable losses of special-status plants will be compensated. If the special-status plant taxa are listed under ESA or CESA, the plan will be submitted to CDFW and/or USFWS (as appropriate) for review and comment. The first priority for compensatory mitigation will be preserving and enhancing existing populations outside of the treatment area, or if that is not an option because existing populations that can be preserved in perpetuity are not available, one of the following mitigation options will be implemented instead: ▶ creating populations on mitigation sites outside of the treatment area through seed collection and dispersal (annual species) or transplantation (perennial species); ▶ purchasing mitigation credits from a CDFW- or USFWS-approved conservation or mitigation bank in sufficient quantities to offset the loss of occupied habitat; and ▶ if the affected special-status plants are not listed under ESA or CESA, compensatory mitigation may include restoring or enhancing degraded habitats so that they are made suitable to support special-status plant species in the future. If relocation efforts are part of the Compensatory Mitigation Plan, the plan will include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term	

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		monitoring requirements. The following performance standards will be applied for relocation: ▶ the extent of occupied area will be substantially similar to the affected occupied habitat and will be suitable for self-producing populations. Re-located/re-established populations will be considered suitable for self-producing when: ▶ habitat conditions allow for plants to reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and ▶ reestablished habitats contain an occupied area comparable to existing occupied habitat areas in similar habitat types in the region. If preservation of existing populations or creation of new populations is part of the mitigation plan, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands and actions (e.g., the number and type of credits, location of mitigation bank or easement, restoration or enhancement actions), parties responsible for the long-term management of the land, and the legal and funding mechanisms (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it. If mitigation includes dedication of conservation easements, purchase of mitigation credits, or other offsite conservation measures, the details of these measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, funding assurances, and success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations. If mitigation includes restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. If the loss of occupied habitat cannot be offset (e.g., if preservation of existing populations or creation of new populations through relocation efforts are not	

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		available for a certain species), and as a result treatment activities would substantially reduce the number or restrict the range of listed plant species, then the treatment will not qualify as within the scope of this PEIR. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit for state-listed plants), if these requirements are equally or more effective than the mitigation identified above.	
Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications Treatment activities implemented under the proposed CalVTP, including prescribed burning, mechanical treatment, manual treatment, prescribed herbivory, and herbicide treatment, could result in direct or indirect adverse effects to several special-status wildlife species. SPRs require pre-treatment surveys to identify special-status wildlife and habitats and avoidance and protection of certain sensitive habitats. While implementation of SPRs would minimize impacts, vegetation treatment activities would still remove vegetation and disturb the ground surface, which could result in the disturbance to or loss of individuals, reduced breeding productivity of affected species, or loss of habitat function. The loss of special-status wildlife species and habitat function would be a potentially significant impact.		**Significance before mitigation, mitigation measures, and significance after mitigation are listed for each wildlife species group**	
Tree-Nesting and Cavity-Nesting Wildlife	PS	**Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)** If California Fully Protected Species or species listed under ESA or CESA are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid adverse effects to the species by implementing the following. <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> ▶ The project proponent will implement one of the following 2 measures to avoid mortality, injury, or disturbance of individuals: 1. Treatment will not be implemented within the occupied habitat. Any treatment activities outside occupied habitat will be a sufficient distance from	LTSM

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		the occupied habitat such that mortality, injury, or disturbance of the species will not occur, as determined by a qualified RPF or biologist; OR 2. Treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, CDFW and/or USFWS will be consulted to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species. ▶ For species listed under ESA or CESA, if the project proponent cannot avoid mortality, injury or disturbance by implementing one of the two options listed above, the project proponent will implement Mitigation Measure BIO-2c. ▶ Injury or mortality of California Fully Protected Species is prohibited pursuant to Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code and will be avoided. <u>Maintain Habitat Function</u> ▶ The project proponent will design treatment activities to maintain the habitat function, by implementing the following: ▪ While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species. ▪ If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that listed or fully protected wildlife with specific requirements for high canopy cover (e.g., Humboldt marten, fisher, spotted owl, coastal California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the	

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		percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained. ▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c. **Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)** If other special-status wildlife species (i.e., species not listed under CESA or ESA or California Fully Protected, but meeting the definition of special status as stated in Section 3.6.1 of the Program EIR) are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid or minimize adverse effects to the species by implementing the following. <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> ▶ The project proponent will implement the following to avoid mortality, injury, or disturbance of individuals: ▪ For all treatment activities except prescribed burning, the project proponent will establish a no-disturbance buffer around occupied sites (e.g., nests, dens, roosts, middens, burrows, nurseries). Buffer size will be determined by a qualified RPF or biologist; however, buffers will generally be a minimum of 100 feet, unless site conditions indicate a smaller buffer would be sufficient for protection or a larger buffer would be needed. Factors to be considered in determining buffer size will include, but not be limited to, the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; baseline levels of noise and human activity; and treatment activity. Buffer size may be adjusted if the qualified RPF or	

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		biologist determines that such an adjustment would not be likely to adversely affect (i.e., cause mortality, injury, or disturbance to) the species within the nest, den, burrow, or other occupied site. No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified RPF or biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified RPF, biologist, or biological technician may be required to monitor the nest, den, burrow, or other occurrence during treatment if the treatment activity has the potential to result in mortality, injury, or disturbance. ▪ For prescribed burning, the project proponent will implement the treatment outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, the qualified RPF or biologist will determine the period of time within which prescribed burning could occur that will avoid or minimize mortality, injury, or disturbance of the species. The project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate limited operating periods. <u>Maintain Habitat Function</u> ▶ For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following: ▪ While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed	

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		species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species. ▪ If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that special-status wildlife with specific requirements for high canopy cover (e.g., northern goshawk, Sierra Nevada snowshoe hare) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted) such that the habitat function is maintained. ▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding habitat function. A qualified RPF or biologist with knowledge of the special-status wildlife species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status wildlife species' habitat or because the loss of special-status wildlife would substantially reduce the number or restrict the range of a special-status wildlife species. If the project proponent determines the impact on special-status wildlife would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status wildlife or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status wildlife would benefit from treatment in the occupied habitat area even though some of the non-listed special-status wildlife may be killed, injured, or disturbed during treatment activities. If it is	

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		determined that treatment activities would be beneficial to special-status wildlife, no compensatory mitigation will be required. **Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)** If the provisions of Mitigation Measure BIO-2a, BIO-2b, BIO-2d, BIO-2e, BIO-2f, or BIO-2g cannot be implemented and the project proponent determines that additional mitigation is necessary to reduce significant impacts, the project proponent will compensate for such impacts to species or habitat by acquiring and/or protecting land that provides (or will provide in the case of restoration) habitat function for affected species that is at least equivalent to the habitat function removed or degraded as a result of the treatment. Compensation may include: 1. Preserving existing habitat outside of the treatment area in perpetuity; this may entail purchasing mitigation credits and/or lands from a CDFW- or USFWS-approved entity in sufficient quantity to offset the residual significant impacts, generally at a ratio of 1:1 for habitat; and 2. Restoring or enhancing habitat within the treatment area or outside of the treatment area (including decommissioning roads, adding or removing perching structures, or removing movement barriers or other features that are adversely affecting the species). The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanisms for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it.	

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		2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. Review requirements are as follows: ▶ For species listed under ESA or CESA or a California Fully Protected Species, the project proponent will submit the mitigation plan to CDFW and/or USFWS for review and comment. ▶ For other special-status wildlife species the project proponent may consult with CDFW and/or USFWS regarding the availability and applicability of compensatory mitigation and other related technical information. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit), if these requirements are equally or more effective than the mitigation identified above. **Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands** The project proponent will implement the following measures when working in treatment areas that contain sensitive natural communities identified during surveys conducted pursuant to SPR BIO-3: ▶ Reference the *Manual of California Vegetation*, Appendix 2, Table A2, *Fire Characteristics* (Sawyer et al. 2009) or other best available information to determine the natural fire regime of the specific sensitive natural community type (i.e., alliance) present. The condition class and fire return interval departure of the vegetation alliances present will also be determined. ▶ Design treatments in sensitive natural communities and oak woodlands to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function of the affected sensitive natural community. Treatments will be designed to replicate the fire regime attributes for the affected sensitive natural community or oak woodland type including seasonality, fire return interval, fire size, spatial complexity, fireline	

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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		intensity, severity, and fire type as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009). Treatments will not be implemented in sensitive natural communities that are within their natural fire return interval (i.e., time since last burn is less than the average time required for that vegetation type to recover from fire) or within Condition Class 1. ▶ To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled). ▶ To the extent feasible, fuel breaks will not remove more than 20 percent of the native vegetation cover from a stand of sensitive natural community vegetation in sensitive natural communities with a rarity rank of S3 (vulnerable) or in oak woodlands. In forest and woodland sensitive natural communities with a rarity rank of S3, and in oak woodlands, only shaded fuel breaks will be installed, and they will not be installed in more than 20 percent of the stand of sensitive natural community or oak woodland vegetation (i.e., if the sensitive natural community covers 100 acres, no more than 20 acres will be converted to create the fuel break). ▶ Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009). ▶ Time prescribed herbivory to occur when non-target vegetation is not susceptible to damage (e.g. non-target vegetation is dormant or has completed its reproductive cycle for the year). For example, use herbivores to control invasive plants growing in sensitive habitats or sensitive natural communities when sensitive vegetation is dormant but invasive plants are growing. Timing of herbivory to avoid non-target vegetation will be determined by a qualified botanist, RPF, or biologist based on the specific vegetation alliance being treated, the life forms and life conditions of its characteristic plant species, and the sensitivity of the non-target vegetation to the effects of herbivory.	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		A qualified RPF or botanist with knowledge of the affected sensitive natural community will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat functions of the sensitive natural community or oak woodland. If the project proponent determines the impact on sensitive natural communities or oak woodlands would be less than significant, no further mitigation will be required. If the project proponent determines that the loss or degradation of sensitive natural communities or oak woodlands would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-3b will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the sensitive natural community or oak woodland would benefit from treatment in the occupied habitat area even though some loss may occur during treatment activities. If it is determined that treatment activities would be beneficial to sensitive natural communities or oak woodlands, no compensatory mitigation will be required. **Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands** If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under Mitigation Measure BIO-3a, the project proponent will implement the following actions: ▶ Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by: ▪ restoring sensitive natural community or oak woodland functions and acreage within the treatment area; ▪ restoring degraded sensitive natural communities or oak woodlands outside of the treatment area at a sufficient ratio to offset the loss of acreage and habitat function; or ▪ preserving existing sensitive natural communities or oak woodlands of equal or better value to the sensitive natural community lost through a	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		conservation easement at a sufficient ratio to offset the loss of acreage and habitat function. ▶ The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on sensitive natural communities or oak woodlands that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. **Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat** If, after implementation of SPR BIO-4, impacts to riparian habitat remain significant under CEQA, the project proponent will implement the following: ▶ Compensate for unavoidable losses of riparian habitat acreage and function by: ▪ restoring riparian habitat functions and acreage within the treatment area; ▪ restoring degraded riparian habitat outside of the treatment area; ▪ purchasing riparian habitat credits at a CDFW-approved mitigation bank; or ▪ preserving existing riparian habitat of equal or better value to the riparian habitat lost through a conservation easement at a sufficient ratio to offset the loss of riparian habitat function and value.	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		▶ The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on riparian habitat that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing riparian habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it. 2. For restoring or enhancing riparian habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above.	
Shrub-Nesting Wildlife	PS	**Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)** **Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)** **Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)**	LTSM

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		Mitigation Measure BIO-2d: Implement Protective Measures for Valley Elderberry Longhorn Beetle (All Treatment Activities) If elderberry shrubs within the documented range of valley elderberry longhorn beetle are identified during review and surveys for SPR BIO-1, and valley elderberry longhorn beetle or likely occupied suitable elderberry habitat (e.g., within riparian, within historic riparian, containing exit holes) is confirmed to be present during protocol-level surveys following the protocol outlined in USFWS *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017) per SPR BIO-10, the following protective measures will be implemented to avoid and minimize impacts to valley elderberry longhorn beetle: ▶ If elderberry shrubs are 165 feet or more from the treatment area, and treatment activities would not encroach within this distance, direct or indirect impacts are not expected and further mitigation is not required. ▶ If elderberry shrubs are located within 165 feet of the treatment area, the following measures will be implemented: ▪ A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be fenced or flagged and maintained to avoid direct impacts (e.g., damage to root system) that could damage or kill the plant, with the exception of the following activities: – Manual trimming of elderberry shrubs will only occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects on valley elderberry longhorn beetle. – Manual or mechanical vegetation treatment within the drip-line of any elderberry shrub will be limited to the season when adults are not active (August - February), will be limited to methods that do not cause ground disturbance, and will avoid damaging the elderberry. ▪ A qualified RPF or biologist familiar with valley elderberry longhorn beetle and its life history will monitor the work area to ensure the avoidance and minimization measures are implemented. If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of VELB or degradation of occupied habitat such that its	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c. Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat	
Ground-Nesting Wildlife	PS	Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities) Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities) Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat	LTSM
Burrowing or Denning Wildlife	PS	Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities) Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities) Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands	LTSM

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands **Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat**	
Insects and Other Terrestrial Invertebrates	PS	**Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)** **Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)** **Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)** **Mitigation Measure BIO-2d: Implement Protective Measures for Valley Elderberry Longhorn Beetle (All Treatment Activities)** **Mitigation Measure BIO-2e: Design Treatment to Retain Special-Status Butterfly Host Plants (All Treatment Activities)** If federally listed butterflies are identified as occurring or having potential to occur during review and surveys for SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, then the following measures will be implemented: ▶ Treatment areas within the range of these species will be surveyed for the host plant for each species (Table 3.6-34). ▶ Host plants for federally listed butterflies within the occupied habitat will be marked with high-visibility flagging, fencing, or stakes, and no treatment activities will occur within 10 feet of these plants. ▶ Because prescribed herbivory could result in the indiscriminate removal of the host plants for federally listed butterflies, this treatment type will not be used within occupied habitat of any federally listed butterfly species, unless it is known that the host plant is unpalatable to the herbivore. ▶ Treatment areas that are not occupied but are within the range of the federally listed butterfly will be divided into as many treatment units as feasible such that the entirety of the habitat is not treated within the same year. ▶ Treatments will be conducted in a patchy pattern to the extent feasible in areas that are not occupied but are within the range of the federally listed butterfly,	SU

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		such that the entirety of the habitat is not burned or removed and untreated portions of suitable habitat are retained. If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of federally listed butterflies or degradation of occupied habitat (host plants) such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c. **CESA and ESA Listed Species.** A qualified RPF or biologist will determine if, after implementation of any feasible impact avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed butterflies or degradation of occupied habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. **Other Special-status Species.** A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA, because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status butterflies would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status butterflies or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status butterfly would benefit from treatment in the occupied habitat area even though some may be killed, injured or disturbed during treatment activities. If it is determined that treatment activities would be beneficial to special-status butterflies, no compensatory mitigation will be required.	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	

Table 3.6-34 Special-status Butterflies and Associated Host Plants

Butterfly Species	Host Plants
bay checkerspot butterfly	dwarf plantain (*Plantago virginica*), purple owl's clover (*Castilleja exserta*)
Behren's silverspot butterfly	blue violet (*Viola adunca*)
callippe silverspot butterfly	California golden violet (*Viola pedunculata*)
Carson wandering skipper	salt grass (*Distichlis spicata*)
El Segundo blue butterfly	seacliff buckwheat (*Eriogonum parvifolium*)
Hermes copper butterfly	spiny redberry (*Rhamnus crocea*)
Kern primrose sphinx moth	plains evening-primrose (*Camissonia contorta*), field primrose (*Camissonia campestris*)
Laguna Mountains skipper	Cleveland's horkelia (*Horkelia clevelandii*), sticky cinquefoil (*Drymocallis glandulosa*)
Lange's metalmark butterfly	naked-stemmed buckwheat (*Eriogonum nudum*)
lotis blue butterfly	seaside bird's foot trefoil (*Hosackia gracilis*)
Mission blue butterfly	lupine (*Lupinus* spp.)
Myrtle's silverspot butterfly	blue violet
Oregon silverspot butterfly	blue violet
Palos Verdes blue butterfly	Santa Barbara milkvetch (*Astragalus trichopodus*), common deerweed (*Acmispon glaber*)
San Bruno elfin butterfly	broadleaf stonecrop (*Sedum spathulifolium*), manzanita (*Arctostaphylos* spp.), huckleberry (*Vaccinuum* spp.)
Smith's blue butterfly	seacliff buckwheat, seaside buckwheat (*Eriogonum latifolium*)
Quino checkerspot butterfly	dwarf plantain, purple owl's clover

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		Mitigation Measure BIO-2f: Avoid Habitat for Special-Status Beetles, Flies, Grasshoppers, and Snails (All Treatment Activities) If treatment activities would occur within the limited range of any state or federally listed beetle, fly, grasshopper, or snail, and these species are identified as occurring or having potential to occur due to the presence of potentially suitable habitat during review and surveys for SPR BIO-1 and surveys for SPR BIO-10, then the following measures will be implemented: ▶ To avoid and minimize impacts to Mount Hermon June beetle and Zayante band-winged grasshopper, treatment activities will not occur within "Sandhills" habitat in Santa Cruz County, the only suitable habitat for these species. ▶ To avoid and minimize impacts to Casey's June beetle, Delhi Sands flower-loving fly (Rhaphiomidas terminates abdominalis), Delta green ground beetle (Elaphrus virisis), Morro shoulderband snail, Ohlone tiger beetle (Cicindela ohlone), and Trinity bristle snail, treatment activities will not occur within habitat in the range of these species that is deemed suitable by a qualified RPF or biologist with familiarity of the species. If the project proponent cannot implement the measures above to avoid mortality, injury or disturbance to listed beetles, flies, grasshoppers, and snails, or degradation of suitable habitat such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c. **Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees (All Treatment Activities)** If special-status bumble bees are identified as occurring during review and surveys under SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, or if suitable habitat for special-status bumble bees is identified during review and surveys under SPR BIO-1 (e.g., wet meadow, forest meadow, riparian, grassland, or coastal scrub habitat containing sufficient floral resources within the range of the species), then the project proponent will implement the following measures, as feasible: ▶ Prescribed burning within occupied or suitable habitat for special-status bumble bees will occur from October through February to avoid the bumble bee flight season.	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		▶ Treatment areas in occupied or suitable habitat will be divided into a sufficient number of treatment units such that the entirety of the habitat is not treated within the same year; the objective of this measure is to provide refuge for special-status bumble bees during treatment activities and temporary retention of suitable floral resources proximate to the treatment area. ▶ Treatments will be conducted in a patchy pattern to the extent feasible in occupied or suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of unburned floral resources for special-status bumble bees within the treatment area). ▶ Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March through September). **CESA and ESA Listed Species.** A qualified RPF or biologist will determine if, after implementation of feasible avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance to the species, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed bumble bees (in the event the Candidate listing is confirmed) or degradation of occupied (or assumed to be occupied) habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. **Other Special-status Species.** A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status bumble bees would be less than significant, no further mitigation will be	

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		required. If the project proponent determines that the loss of special-status bumble bees or degradation of occupied (or assumed to be occupied) habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status bumble bee would benefit from treatment in the occupied (or assumed to be occupied) habitat area even though some of the non-listed special-status bumble bees may be killed, injured, or disturbed during treatment activities. If it is determined that treatment activities would be beneficial to special-status bumble bees, no compensatory mitigation will be required. Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat	
Bats	PS	Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities) Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities) Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat	LTSM

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
Ungulates	PS	Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities) Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities) Mitigation Measure BIO-2h: Avoid Potential Disease Transmission Between Domestic Livestock and Special-Status Ungulates (Prescribed Herbivory) The project proponent will implement the following measure if treatment activities are planned within the range of desert bighorn sheep, peninsular bighorn sheep, Sierra Nevada bighorn sheep, or pronghorn: ▶ Prescribed herbivory activities will be prohibited within a 14-mile buffer around suitable habitat for any species of bighorn sheep within the range of these species consistent with the more stringent recommendations in the Recovery Plan for Sierra Nevada bighorn sheep (USFWS 2007). ▶ Prescribed herbivory activities will be avoided within the range of pronghorn where feasible (where this range does not overlap with the range of any species of bighorn sheep). Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat	LTSM
Fish and Aquatic Invertebrates	LTS (in rivers, streams, lakes) PS (in wetlands, vernal pools)	Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities) Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)	LTS (in rivers, streams, lakes) LTSM (in wetlands,

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands **Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands** **Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat** **Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands** Impacts to wetlands will be avoided using the following measures: ▶ The qualified RPF or biologist will delineate the boundaries of federally protected wetlands according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and the appropriate regional supplement for the ecoregion in which the treatment is being implemented. ▶ The qualified RPF or biologist will delineate the boundaries of wetlands that may not meet the definition of waters of the United States, but would qualify as waters of the state, according to the state wetland procedures (California Water Boards 2019 or current procedures). ▶ A qualified RPF or biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified RPF or biologist and will depend on the type of wetland present (e.g., seasonal wetland, wet meadow, freshwater marsh, vernal pool), the timing of treatment (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the treatment activities, environmental conditions and terrain, and the treatment activity being implemented. ▶ A qualified RPF or biological technician will periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided. ▶ Within this buffer, herbicide application is prohibited.	vernal pools)

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant		LTSM = Less than significant with Mitigation SU = Significant and unavoidable	
		▶ Within this buffer, soil disturbance is prohibited. Accordingly, the following activities are not allowed within the buffer zone: mechanical treatments, prescribed herbivory, equipment and vehicle access or staging. ▶ Only prescribed (broadcast) burning may be implemented in wetland habitats if it is determined by a qualified RPF or biologist that: ▪ No special-status species are present in the wetland habitat ▪ The wetland habitat function would be maintained. ▪ The prescribed burn is within the normal fire return interval for the wetland vegetation types present ▪ Fire containment lines and pile burning are prohibited within the buffer.	
Amphibians and Reptiles	LTS (in rivers, streams, lakes) PS (in wetlands, vernal pools, associated riparian)	**Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)** **Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)** **Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)** **Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands** **Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands** **Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat** **Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands**	LTS (in rivers, streams, lakes) LTSM (in wetlands, vernal pools, associated riparian)
Impact BIO-3: Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation that Leads to Loss of Habitat Function Vegetation treatment activities could result in loss or degradation of sensitive habitats, including designated sensitive natural communities, riparian habitats, and oak woodlands. Implementation of SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-8, BIO-9, and HYD-4 require that potential sensitive natural communities and other sensitive habitats be identified and protected prior to implementing	PS	**Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands** **Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands** **Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat**	LTSM

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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treatments. Implementation of SPR BIO-5 would avoid environmental effects of type conversion in chaparral and coastal sage scrub habitats. While SPRs would minimize impacts, treatment activities could still result in a loss of acreage of sensitive natural communities and habitats, eliminate sensitive natural communities or habitats from a treatment area, or reduce the habitat value or function of sensitive natural communities and habitats. Many riparian, chaparral, and coastal sage scrub habitats are also designated sensitive natural communities and are considered ESHAs in the coastal zone. Sensitive natural communities (vegetation alliances with state or global rarity ranks 1, 2, or 3) are also considered ESHAs in the coastal zone. Loss or degradation of sensitive natural communities and sensitive habitats would be a potentially significant impact.			
Impact BIO-4: Substantially Affect State or Federally Protected Wetlands Treatment activities proposed under the CalVTP could occur on lands that contain state or federally protected wetlands; these activities could remove wetland vegetation and alter wetland hydrology or topography resulting in loss or degradation of wetland function. Implementation of SPRs BIO-1 and HYD-4 require that potential wetlands be identified and protected prior to implementing treatments. While implementation of SPRs would minimize impacts, treatment activities could inadvertently destroy or adversely modify protected wetlands resulting in loss of these resources. Additionally, prescribed burning would result in direct removal of wetland vegetation that could adversely modify wetland functions and reduce wetland values. If this occurred, it would be a potentially significant impact.	PS	**Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands**	LTSM
Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries Vegetation treatment activities implemented under the CalVTP could be located in areas used as wildlife movement corridors or nurseries. Treatment-related noise and disturbance could lead to temporary changes in migration or movement patterns, and fencing for prescribed herbivory could potentially injure or impede moving wildlife. Wildlife nursery sites could be disturbed or essential nursery habitat components could be degraded by vegetation treatment activities. SPRs BIO-1, BIO-4, BIO-5, BIO-10, BIO-11, HYD-1, and HYD-4 require identification of nursery sites prior to treatment activities, actions to prevent degradation of aquatic and riparian corridors, and installation of wildlife-friendly fencing to avoid	PS	**Mitigation Measure BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites** The project proponent will implement the following measures while working in treatment areas that contain nursery sites identified in surveys conducted pursuant to SPR BIO-10: ▶ Retain Known Nursery Sites. A qualified RPF or biologist will identify the important habitat features of the wildlife nursery and, prior to treatment activities, will mark these features for avoidance and retention during treatment. ▶ Establish Avoidance Buffers. The project proponent will establish a non-disturbance buffer around the nursery site if activities are required while the	LTS

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entanglement during wildlife movement. Temporary shifts in wildlife movements to avoid or navigate around active treatment sites and associated disturbances would not substantially interfere with movement requirements or migration patterns; and project implementation would not create long-term barriers to local or landscape-level movements. While implementation of SPRs would minimize impacts, nursery sites could still be removed, degraded, or disturbed during treatment activities. This would be a potentially significant impact.		nursery site is active/occupied. The appropriate size and shape of the buffer will be determined by a qualified RPF or biologist, based on potential effects of project-related habitat disturbance, noise, visual disturbance, and other factors. No treatment activity will commence within the buffer area until a qualified RPF or biologist confirms that the nursery site is no longer active/occupied. Monitoring of the nursery site by a qualified RPF or biological technician during and after treatment activities will be required. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops.	
Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife, Including Nesting Birds Vegetation treatments conducted under the CalVTP would occur in habitats that support common native bird, mammal, reptile, amphibian, and invertebrate species. Treatment activities could disturb breeding; remove or damage active nests, dens, and other breeding sites; kill or injure individuals; and temporarily reduce breeding productivity of these species. Because treatments would be implemented within relatively small proportions of the extensive ranges of common species, and suitable habitat would remain available to these species across the broader landscape surrounding treatment areas, the magnitude of these potential losses would not substantially reduce the overall abundance of any common wildlife species, including nesting birds. Additionally, implementation of SPRs BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5 would limit the loss or degradation of some high-quality breeding habitats for special-status wildlife that would also benefit common species. Therefore, treatment activities would not substantially reduce the population size of or availability of suitable breeding habitat for any common wildlife species. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources Vegetation treatment projects implemented under the CalVTP that are subject to local policies or ordinances would be required to comply with any applicable county, city, or other local policies, ordinances, and permitting procedures related to protection of biological resources. Additionally, SPR AD-3 (Consistency with Local Plans, Policies, and Ordinances) requires that the project proponent design and implement the treatment in a manner that is consistent with applicable local	NI	No mitigation is required.	NI

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plans (e.g., general plans), policies, and ordinances to the extent the project is subject to them. Therefore, the CalVTP would result in no impact related to potential conflict with local policies or ordinances protecting biological resources.			
Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan Several HCPs and NCCPs have been adopted or are being planned for areas within the treatable landscape. Consistency of discretionary projects with an adopted HCP, NCCP, or other conservation plan is a legal requirement; and, the design, approval, and permitting of vegetation treatment projects under the CalVTP within an area covered by an adopted conservation plan would comply with that requirement. Therefore, approved treatment activities would result in no impact related to potential conflict with the provisions of adopted HCPs, NCCPs, or other approved local, regional, or state habitat conservation plans.	NI	No mitigation is required.	NI
Geology, Soils, and Mineral Resources			
Impact GEO-1: Result in Substantial Erosion or Loss of Topsoil Treatment activities implemented under the proposed CalVTP may involve the disturbance of soils as well as the reduction in vegetative cover, which has the potential to substantially increase rates of erosion and loss of topsoil. Mechanical treatments using heavy machinery are the most likely to cause soil disturbance which could lead to substantial erosion or loss of topsoil especially in areas of steep slopes. In general, it is highly likely that mechanical treatments (relative to other treatment activities) would be utilized for all treatment types in tree fuel types as well as for WUI fuel reduction treatments in shrub fuel types. Additionally, prescribed burning can increase risk of water repellency (Robichaud et al. 2010) and breakdown of soil structure, which can lead to significant increases in erosion. There is a high likelihood that prescribed burning would be utilized most for ecological restoration treatments in grass fuel types, a moderate likelihood it would be utilized to implement fuel break and ecological restoration treatments in tree fuel types, and a moderate likelihood it would be utilized for fuel break treatments in shrub fuel types. The CalVTP would reduce the amount of vegetation in all treated areas, which has the potential to expose soil to wind and water erosion. Implementation of SPRs GEO-1 through GEO-8 will avoid and minimize the risk of substantial erosion and loss of topsoil. This impact would be less than significant.	LTS	No mitigation is required.	LTS

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Impact GEO-2: Increase Risk of Landslide Removal of vegetation during treatments activities implemented under the CalVTP could affect the root structure in treated areas such that the stability of slopes and soils could decrease, which would increase the risk of landslide. Additionally, by removing vegetation, the soil water content could increase due to lack of uptake and transpiration by the vegetation. Higher soil water content could potentially destabilize slopes and increase the risk of landslide. Landslide risk would increase in areas with steeper slopes and where previous landslide has occurred. Implementation of SPRs GEO-3, GEO-4, GEO-7, and GEO-8 would avoid or minimize the risk of landslide resulting from CalVTP treatments. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Greenhouse Gas Emissions			
Impact GHG-1: Conflict with Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs The CalVTP would be consistent with applicable plans, policies, and regulations aimed at reducing GHG emissions, including *California's 2017 Climate Change Scoping Plan*, the *California Forest Carbon Plan*, and *California 2030 Natural and Working Lands Climate Change Implementation Plan*. The purpose of the CalVTP is to reduce wildfire risk, which is could reduce GHG emissions and increase carbon sequestration over the long term. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact GHG-2: Generate GHG Emissions through Treatment Activities Direct GHG emissions from the proposed increase in annual treatment activities conducted under the CalVTP would be substantial, recognizing planned levels of treatment would increase from 33,000 acres to 250,000 acres per year. At the full target rate of 250,000 acres per year, GHG emissions from treatments would amount to an estimated 4,051 MMTCO2e annually. Consistent with the goals of the proposed fuel treatments to decrease the occurrence of high-severity wildfires and increase the potential rates of carbon sequestration, implementation of the CalVTP could result in a cumulative net carbon benefit over the long term, which is the most relevant timeframe and global context of GHG-caused, climate change–related environmental effects. However, there is uncertainty in predicting future wildfire occurrence and carbon sequestration rates, which are highly variable depending on many factors. Future wildfire intensities and carbon sequestration in	PS	**Mitigation Measure GHG-2. Implement GHG Emission Reduction Techniques During Prescribed Burns** When planning for and conducting a prescribed burn, project proponents implementing a prescribed burn will incorporate feasible methods for reducing GHG emissions, including the following, which are identified in the *National Wildfire Coordinating Group Smoke Management Guide for Prescribed Fire* (NWCG 2018): ▶ reduce the total area burned by isolating and leaving large fuels (e.g., large logs, snags) unburned; ▶ reduce the total area burned through mosaic burning; ▶ burn when fuels have a higher fuel moisture content;	SU

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treated areas are the subjects of continued scientific research and debate. o meet CEQA's mandate of good faith disclosure and acknowledge potential future impacts in light of uncertainties, this GHG impact is classified as potentially significant, recognizing the reliability of estimates for direct GHG emissions and the uncertainty of the intended net carbon benefits of reduced wildfire intensity and increased carbon sequestration in treated areas.		▶ reduce fuel loading by removing fuels before ignition. Methods to remove fuels include mechanical treatments, manual treatments, prescribed herbivory, and biomass utilization; and ▶ schedule burns before new fuels appear. The project proponent will document in the Burn Plan required pursuant to SPR AQ-3 which methods for reducing GHG emissions can feasibly be integrated into the treatment design.	
Energy Resources			
Impact ENG-1: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy Energy would be consumed under the proposed CalVTP in the form of fossil fuel (e.g., diesel and other petroleum fuels) combustion in the engines of vehicles and equipment, which would be used by workers accessing treatment areas and during implementation of treatment activities. Consistent with the CalVTP's purpose of reducing wildfire risk and to the extent it would decrease intensity of wildfires, implementation of treatment activities would also reduce the intensity of fire response. With less intense wildfire response and its relatively inefficient consumption of energy, fuel and energy consumption for wildfire response would decrease, as well. Thus, impacts related to consumption of energy resources would be less than significant.	LTS	No mitigation is required.	LTS
Hazardous Materials, Public Health and Safety			
Impact HAZ-1: Create a Significant Health Hazard from the Use of Hazardous Materials Treatment activities proposed under the CalVTP would require the use of various types of equipment and vehicles, which need fuels, oils, and lubricants to operate. The use, transport, and disposal of these substances could result in an accidental upset or health hazard if released into the environment. SPR HAZ-1 would be implemented during treatment activities under the CalVTP; it requires that all equipment be properly maintained per manufacturer's specifications, requires regular inspection of all equipment for leaks, and requires that any equipment found leaking is required to be promptly removed from a treatment site. This SPR would minimize leaks and the potential for resultant contamination to enter the environment. Furthermore, several federal and state laws regulate the use, transport, storage, and disposal of hazardous materials, including the HWCA,	LTS	No mitigation is required.	LTS

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DTSC's Unified Program, and OSHA and EPA regulations, which all project proponents would be required to comply with. Although implementation of the CalVTP would increase the pace and scale of treatments and thus increase the use of hazardous materials in the treatable landscape, no new or more severe significant hazards to the public would be created from implementation of the CalVTP. This impact would be less than significant.			
Impact HAZ-2: Create a Significant Health Hazard from the Use of Herbicides Herbicide application under the CalVTP would require increased transportation, use, storage, and disposal of various herbicides, which could result in risks related to human exposure when applied in areas in close proximity to the public. Under normal conditions, compliance with all laws, regulations, and herbicide label instructions, along with proper personal protective equipment (PPE), would prevent significant risks related to human exposure to herbicides. However, potentially adverse effects could occur if a large spill were to occur or should spraying from equipment on vehicles occur in close proximity to public areas. Several SPRs have been incorporated into the program to minimize the potential for significant health risks (SPR HAZ-5 through 9). These SPRs require project proponents to prepare a SPRP prior to beginning herbicide treatment activities to provide protection to onsite workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants (SPR HAZ-5); comply with all herbicide application regulations to protect the safety of workers and the public during the transport, use, storage, and disposal of herbicides (SPR HAZ-6); triple rinse herbicide containers with clean water at an approved site and dispose of rinsate per 3 CCR Section 6684 and dispose of all herbicides following label requirements and waste disposal regulations to avoid direct contamination to a water body or watershed (SPR HAZ-7); employ techniques during herbicide application to minimize drift (SPR HAZ-8); and include signage indicating that herbicide application is occurring or has occurred where members of the public could be present within 500 feet of areas receiving herbicide treatments (SPR HAZ-9). Although implementation of the CalVTP would increase the pace and scale of treatments and thus increase the use of herbicides in the treatable landscape, no new or more severe significant hazards to the public would be created from implementation of the CalVTP. This impact would be less than significant.	LTS	No mitigation is required.	LTS

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Impact HAZ-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites Soil disturbance by mechanical treatments and prescribed burning have the potential to expose workers, the public, and the environment to risks associated with existing hazardous materials if present within treatment areas. Treatment activities would typically occur in undeveloped areas, which are unlikely to contain hazardous materials; however, there is a risk that contamination could exist. Disturbance of contaminated sites could result in the exposure of the public and environment to health hazards from existing hazardous materials. This impact is potentially significant.	PS	**Mitigation Measure HAZ-3: Identify and Avoid Known Hazardous Waste Sites** Prior to the start of vegetation treatment activities requiring soil disturbance (i.e., mechanical treatments) or prescribed burning, CAL FIRE and other project proponents will make reasonable efforts to check with the landowner or other entity with jurisdiction (e.g., California Department of Parks and Recreation) to determine if there are any sites known to have previously used, stored, or disposed of hazardous materials. If it is determined that hazardous materials sites could be located within the boundary of a treatment site, the project proponent will conduct a DTSC EnviroStor web search (https://www.envirostor.dtsc.ca.gov/public/) and consult DTSC's Cortese List to identify any known contamination sites within the project site. If a proposed mechanical treatment or prescribed burn is located on a site included on the DTSC Cortese List as containing potential soil contamination that has not been cleaned up and deemed closed by DTSC, the area will be marked and no prescribed burning or soil disturbing treatment activities will occur within 100 feet of the site boundaries. If it is determined through coordination with landowners or after review of the Cortese List that no potential or known contamination is located on a project site, the project may proceed as planned.	LTSM
Hydrology and Water Quality			
Impact HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Prescribed Burning Implementation of the CalVTP includes prescribed broadcast burning and pile burning in tree, shrub, and grass fuel types across the state. Prescribed broadcast burning would include fire behavior modeling and burning would be conducted when fuel moisture and environmental conditions allow for effective fuel reduction while reducing the risk of high severity burns. The patchwork of low and moderate intensity fire in a prescribed burn would preserve vegetated islands to capture runoff and sediment and buffers would be preserved to act as buffers around watercourses. Compared to forested and grassland environments, prescribed fire in chaparral and shrublands is more likely to result in severe burns and increased sediment loading. However, the proposed program would utilize prescribed burning in these vegetation types only when it is consistent with the natural fire return interval or	LTS	No mitigation is required.	LTS

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when the project proponent clearly demonstrates that habitat function would be protected. Because the CalVTP includes SPRs incorporating best management practices to protect water quality, the potential for prescribed burns implemented under the CalVTP to adversely affect water quality would be less than significant.			
Impact HYD-2: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Manual or Mechanical Treatment Activities The proposed CalVTP includes manual and mechanical treatment activities to reduce wildfire risk within the treatable landscape. All qualifying manual and mechanical treatments implemented under the CalVTP would integrate SPRs into treatment design to protect watercourses, limit equipment use on wet soils or steep slopes, stabilize highly disturbed areas, prevent concentration of runoff in non-shaded fuel breaks, and prevent spill or leaks from equipment. Implementation of SPRs would avoid and minimize the risk of substantial degradation to surface or groundwater quality from manual or mechanical treatment activities; this impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact HYD-3: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through Prescribed Herbivory The proposed program includes the use of prescribed herbivory to reduce fuels. Qualifying treatments under the proposed CalVTP would incorporate livestock management best practices in SPR HYD-3 which exclude grazing animals from sensitive areas, provide alternative water sources, and move animals when erosion is observed. For these reasons, the risk of substantial degradation to surface or groundwater quality from prescribed herbivory would be less than significant.	LTS	No mitigation is required.	LTS
Impact HYD-4: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Ground Application of Herbicides The CalVTP would ensure that herbicides are applied according to the manufacturer's label directions and consistent with program SPRs which limit herbicide use in sensitive areas or under conditions that could lead to	LTS	No mitigation is required.	LTS

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misapplication and require each project to be prepared to respond to a spill. Because qualifying projects would integrate these protective measures into treatment design, risk of substantial degradation to surface or groundwater quality from herbicide application would be avoided and minimized; this impact would be less than significant.			
Impact HYD-5: Substantially Alter the Existing Drainage Pattern of a Treatment Site or Area Treatments implemented under the CalVTP would include ground disturbing activities that could intersect existing drainage infrastructure at treatment sites. As discussed in Impacts HYD-1 through HYD-4, prescribed burning, prescribed herbivory, and most forms of mechanical vegetation removal would have minor effects on site drainage. Non-shaded fuel breaks constructed along roadways could intersect existing roadway drainage systems. SPR HYD-6 requires that all projects avoid disturbance of existing drainage systems and maintain pre-treatment drainage conditions. Therefore, qualifying treatments implemented under the CalVTP would not substantially alter the existing drainage pattern of a treatment site or area. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Land Use and Planning, Population and Housing			
Impact LU-1: Cause a Significant Environmental Impact Due to a Conflict with a Land Use Plan, Policy, or Regulation The proposed CalVTP would implement vegetation treatment on lands owned and managed by various entities, including state agencies, private owners, special districts, non-profit organizations, cities, and counties. For projects on state lands, a land management agency would develop the project consistent with its land management plan. For projects subject to local plans, policies, or regulations, CAL FIRE would voluntarily seek to operate consistently with local governance to the extent feasible. In general, all project proponents will design and implement treatments in a manner that is consistent with applicable local plans (e.g., general plans), policies, and ordinances to the extent the project is subject to them, as required SPR AD-3. Furthermore, the environmental impacts of the proposed CalVTP are addressed throughout this PEIR and mitigation is identified to reduce significant effects, thereby avoiding a conflict with a land use plan, policy, or regulation that was adopted for the purpose of avoiding or mitigating an environmental effect. This impact would be less than significant.	LTS	No mitigation is required.	LTS

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Impact LU-2: Induce Substantial Unplanned Population Growth The increase in the pace and scale of vegetation treatments under the proposed CalVTP would result in additional demand for employees to implement treatments across the state within and near the treatable landscape. Implementation of the proposed CalVTP would result in an average of approximately five additional employees within each CAL FIRE unit (21 units). Other state agencies, such as CSP and CDFW, could also generate demand for some additional employees, although at a lower rate than the employment increase anticipated for CAL FIRE. Other project proponents may employ or contract workers permanently or seasonally to perform treatments. The increase in employee demand would be spread throughout the state and there would not be any specific areas that would experience a substantial increase in demand for vegetation treatment employees. Thus, implementation of the proposed CalVTP would not induce substantial unplanned population growth in any one area to cause a need for new housing, roads, or infrastructure. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Noise			
Impact NOI-1: Result in a Substantial Short-Term Increase in Exterior Ambient Noise Levels During Treatment Implementation Vegetation treatment activities implemented under the CalVTP would adhere to the SPRs that require consistency with local noise policies and ordinances to the extent the project is subject to them, limit vegetation treatment activities to daytime hours, ensure proper notification of nearby sensitive receptors, and locate treatment activities and staging areas away from sensitive receptors to minimize noise exposure. Additionally, any increase in noise exposure at nearby receptors would be temporary and periodic. Therefore, implementation of the CalVTP would not result in the exposure of noise-sensitive receptors to a substantial temporary increase in ambient noise levels. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact NOI-2: Result in a Substantial Short-Term Increase in Truck-Generated SENL's During Treatment Activities Because vegetation treatment activities under the CalVTP would be required to adhere to SPR NOI-1, which limits vegetation treatment activities to daytime hours, SENLs generated by associated haul truck trips would not have the potential to result in sleep disturbance during noise-sensitive evening and nighttime hours. For	LTS	No mitigation is required.	LTS

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this reason, implementation of the CalVTP would not result in a substantial temporary increase in SENL's during vegetation treatment activities. This impact would be less than significant.			
Recreation			
Impact REC-1: Directly or Indirectly Disrupt Recreational Activities within Designated Recreation Areas Implementation of treatment activities within the treatable landscape could result in potential conflicts with recreationists and recreation areas. Conflicts include access restrictions or nuisance impacts during treatment activities including degradation of views, dust emissions, and increased traffic that disrupt the recreational experience. Implementation of SPRs would avoid and minimize disruptions to recreation. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Transportation			
Impact TRAN-1: Result in Temporary Traffic Operations Impacts by Conflicting with a Program, Plan, Ordinance, or Policy Addressing Roadway Facilities or Prolonged Road Closures Vegetation treatments implemented under the CalVTP would adhere to the SPRs that require consistency with local traffic operations policies and standards to the extent the project is subject to them, and would require that a TMP be prepared to manage and minimize potential temporary traffic operations effects resulting from individual vegetation treatment projects. Additionally, effects related to traffic operations during vegetation treatments under the CalVTP would be localized and temporary. Therefore, temporary traffic operations impacts would be less than significant.	LTS	No mitigation is required.	LTS
Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses Implementation of the CalVTP would not require the construction or alteration of any roadways, and qualifying vegetation treatment projects under the CalVTP would adhere to SPRs that manage and minimize potential hazards due to smoke generated during prescribe burns. The project proponent would prepare and implement a TMP to avoid and minimize temporary transportation impacts. Therefore, vegetation treatment activities would not substantially increase hazards due to a design feature or incompatible uses. This impact would be less than significant.	LTS	No mitigation is required.	LTS

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Impact TRAN-3: Result In a Net Increase in VMT for the Proposed CalVTP Under the proposed CalVTP, the scale of treatment activities would substantially increase to achieve the annual treatment target of approximately 250,000 acres. With the increase in treatment acreage, the VMT generated by treatment activities in comparison to existing conditions would also increase because many more individual treatment projects would be implemented. A key goal of the CalVTP is to decrease the occurrence and severity of wildfires. Reduced occurrence and severity of wildfires would result in a reduction in response activity and trips, which would be reasonably expected to decrease in VMT over the long term, compared to conditions without the CalVTP. However, it is not feasible to predicting changes in wildfire occurrence and severity sufficiently to quantify potential changes in fire response VMT. Thus, to meet CEQA's mandate of good faith disclosure and to not risk understating potential future impacts in light of the uncertainties, this PEIR classifies this impact as potentially significant, because VMT generated by vegetation treatments under the CalVTP would increase in comparison to existing conditions, notwithstanding the potential VMT-reducing effects of reduced wildfire response.	PS	Additional measures are not feasible.	SU
Public Services, Utilities, and Service Systems			
Impact UTIL-1: Result in Physical Impacts Associated with Provision of Sufficient Water Supplies, Including Related Infrastructure Needs Implementation of treatment activities within the treatable landscape would require on-site water supplies for fire suppression during prescribed burning activities and for dust control during vegetation removal within non-shaded fuel breaks. Water needed to implement treatments would be minimal. Also, treatment activities would occur over a large geographic area which would disperse pressure on local water providers. Therefore, the increase in demand for water attributable to implementation of the CalVTP would be negligible and would not discernably affect the availability of water supply. This impact would be less than significant.	LTS	No mitigation is required.	LTS
Impact UTIL-2: Generate Solid Waste in Excess of State Standards or Exceed Local Infrastructure Capacity The increase in pace and scale of vegetation treatments under the CalVTP would result in an associated increase in the volume of solid organic waste generated during treatment. The volume of biomass transported offsite to existing biomass power plants, wood product processing facilities, and/or composting facilities for	PS	Additional measures are not feasible.	SU

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Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant LTSM = Less than significant with Mitigation SU = Significant and unavoidable			
processing would also increase. Although additional infrastructure for the processing of organic materials is expected to be developed in the near future in California in response to waste management statutes, expanded in-state market for wood products, and increasing demand for alternative energy sources, it is too speculative to assume that this growth would occur consistent with the increased pace and scale of vegetation treatments. Therefore, implementation of the CalVTP may generate solid organic waste in excess of infrastructure capacity. Thus, to meet CEQA's mandate of good faith disclosure and to not risk understating potential future impacts in light of the uncertainties, this PEIR classifies this impact as potentially significant, notwithstanding the possibility that capacity could increase with the scale of treatments such that it would not be exceeded for most or all individual treatments.			
Impact UTIL-3: Comply with Federal, State, and Local Management and Reduction Goals, Statutes, and Regulations Related to Solid Waste Implementation of the CalVTP would divert solid organic waste generated from treatment activities from solid waste facilities to biomass power plant, wood product processing facility, and/or composting for processing. This would decrease the amount of waste transported to solid waste facilities consistent with AB 939 and SB 1383. Therefore, the impact would be less than significant.	LTS	No mitigation is required.	LTS
Wildlife			
Impact WIL-1: Substantially Exacerbate Fire Risk and Expose People to Uncontrolled Spread of a Wildfire Vegetation treatment activities under the CalVTP could result in temporary risks associated with uncontrolled fire from prescribed burning, as well as from the use of vehicles and heavy machinery in the treatable landscape as each can increase the risk of an accidental wildfire ignition. However, several SPRs would be implemented to reduce the risk of uncontrolled spread of fire from treatment activities. Machine-powered hand tools would have federal- or state-approved spark arrestors (SPR HAZ-2); vegetation treatment crews would carry one fire extinguisher per chainsaw and one long-handle shovel and one axe or pulaski (SPR HAZ-3); and smoking would only be permitted in designated smoking areas with barren or cleared mineral soil to at least 3 feet in diameter (SPR HAZ-4). In addition, given the extensive preparation and planning prior to a prescribed burn	LTS	No mitigation is required.	LTS

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant LTSM = Less than significant with Mitigation SU = Significant and unavoidable			
(e.g., preparation of a SMP and Burn Plan), active monitoring and maintenance during a prescribed burn, and implementation of stringent safety protocols, prescription burning would not substantially exacerbate fire risk that could result in the uncontrolled spread of wildfire. Furthermore, one of the main objectives of the proposed CalVTP is reduce the frequency and severity of future uncontrolled wildfire. This impact would be less than significant.			
Impact WIL-2: Expose People or Structures to Substantial Risks Related to Post-Fire Flooding or Landslides The proposed CalVTP does not include new housing nor would it result in substantial unplanned population growth. Therefore, it would not place people or structures in an area with risks related to post-wildfire flooding or landslides. Prescribed burning implemented under the proposed CalVTP would be low severity and typically retain substantial vegetation, thereby maintaining stability of the soil. In addition, SPRs GEO-3, GEO-4, GEO-5, GEO-8, and SPR AQ-3 would be incorporated into qualifying projects under the CalVTP to stabilize disturbed soils from treatments to minimize erosion (SPR GEO-3), inspect treatment areas for evidence of erosion after prior to the rainy season and following the first large rainfall event (SPR GEO-4), drain stormwater via water breaks to reduce stormwater runoff (SPR GEO-5), minimize soil burn severity during prescribed burns which would help to retain vegetation to stabilize the soil (SPR AQ-3), and require that a registered professional forester or licensed geologist evaluate treatment areas for potential issues with instability and modify treatments to account for instability issues (SPR GEO-8). Therefore, prescribed burning under the CalVTP would not expose people or structures to substantial risks from post-prescribed burning landslides or flooding. Furthermore, one of the primary purposes of the CalVTP is to reduce the frequency and severity of wildfire. Therefore, the intended wildfire risk reduction achieved with implementation of the CalVTP could also result in a reduction in the associated post-wildfire risk of landslides and flooding. The impact would be less than significant.	LTS	No mitigation is required.	LTS