Exhibit A

CEQA Findings of Fact and Statement of Overriding Considerations for the

California Vegetation Treatment Program (CalVTP)

California Board of Forestry and Fire Protection

December 2019

CEQA Findings of Fact and Statement of Overriding Considerations for the

California Vegetation Treatment Program (CalVTP)

# introduction

The California Board of Forestry and Fire Protection (the Board), in the exercise of its independent judgment, makes and adopts the following findings regarding its decision to approve the California Vegetation Treatment Program (CalVTP). This document has been prepared in accordance with the California Environmental Quality Act (Pub. Resources Code, §§ 21000 et seq.) (CEQA) and the CEQA Guidelines (Cal. Code Regs., Tit. 14, §§ 15000 et seq.).

# statutory requirements for findings

Public Resources Code section 21002 provides that “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects[.]” The same section provides that the procedures required by CEQA “are intended to assist public agencies in systematically identifying both the significant effects of projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.” (Pub. Resources Code, § 21002.) Section 21002 goes on to provide that “in the event [that] specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.”

The mandate and principles announced in Public Resources Code section 21002 are implemented, in part, through the requirement that agencies must adopt findings before approving projects for which EIRs are required. (See Pub. Resources Code, § 21081, subd. (a); CEQA Guidelines, § 15091, subd. (a).) For each significant environmental effect identified in an EIR for a project, the approving agency must issue a written finding reaching one or more of three permissible conclusions:

1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.
2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

(CEQA Guidelines, § 15091, subd. (a); Pub. Resources Code, § 21081, subd. (a).) Public Resources Code section 21061.1 defines “feasible” to mean “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, legal, and technological factors.” (See also *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 565.)

With respect to a project for which significant impacts are not avoided or substantially lessened, a public agency, after adopting proper findings, may nevertheless approve the project if the agency first adopts a Statement of Overriding Considerations setting forth the specific reasons why the agency found that the project’s “benefits” rendered “acceptable” its “unavoidable adverse environmental effects.” (CEQA Guidelines, §§ 15093, 15043, subd. (b); see also Pub. Resources Code, § 21081, subd. (b).) The Statement of Overriding Considerations for the CalVTP is included herein in Section 10.2.

Here, as explained below and in the Draft Program Environmental Impact Report (Draft PEIR) and the Final PEIR (collectively, the “PEIR”), the CalVTP would result in significant and unavoidable environmental effects to the following: Aesthetics; Air Quality; Archaeological, Historical, and Tribal Cultural Resources; Biological Resources; Greenhouse Gas Emissions; Transportation; and Public Services, Utilities, and Service Systems. For reasons set forth in Section 10.2 below, however, the Board has determined that overriding economic, social, and other considerations outweigh the significant, unavoidable effects of the CalVTP. The Board issues these findings to document its exercise of its independent judgment regarding the potential environmental effects analyzed in the PEIR and to document its reasoning for approving the CalVTP in spite of these effects.

# background and pROGRAM description

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 (VHFHSZ). 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 the VHFHSZ (Reese 2019).

These conditions have resulted in the largest, most destructive, and deadliest wildfires on record in California history, many occurring in 2017 and 2018. 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. As of November 2019, the past five years have averaged 5,365 fires per year. (<https://www.fire.ca.gov/stats-events/>.) In 2017, the most recent year for which data is available, CAL FIRE reported 6,472 fires (State funded and local government contracts); only 66 of those fires are what the Department considers a “Large Fire,” or 300 acres or greater. 6,406 fires, or 98.98%, burned fewer than 300 acres. (<https://www.fire.ca.gov/media/10059/2017_redbook_final.pdf>.) In 2016, CAL FIRE reported 5,322 fires; 5,286, or 99%, burned fewer than 300 acres. (<https://www.fire.ca.gov/media/10060/2016_redbook_final.pdf>.) 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 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.

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). Implementation of the CalVTP will consist of vegetation treatment activities carried out by CAL FIRE on private or public land, by public agencies and organizations funded by grants from CAL FIRE or other state or local agencies, or potentially by public agencies that own and/or manage land within the treatable landscape.

The CalVTP PEIR addresses:

* 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 is 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 the PEIR, in accordance with procedures described in State CEQA Guidelines Section 15168. The streamlined CEQA review approach will document how a project’s environmental effects are covered and which feasible mitigation measures from the CalVTP PEIR are incorporated. This will 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 will 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 will be prepared.

The PEIR also includes standard project requirements (SPRs), which will 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 will be implemented and enforced in the same way as mitigation measures consistent with section 15126.4 of the State CEQA Guidelines. 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 predicable, such that they will be implemented consistently to achieve environmental protection.

(See Final PEIR, Volume (Vol.) II, Chapter 1.)

## ProGRAM location

Appropriate areas within which to implement vegetation treatments as part of the CalVTP were identified by first dividing the SRA into vegetation types from the California Wildlife Habitat Relationship (CWHR) system. The CWHR system, managed by California Department of Fish and Wildlife (CDFW), was developed to categorize major vegetative complexes at a scale sufficient to predict wildlife-habitat relationships. Certain CWHR vegetation types were then excluded because the wildfire risks within these types are negligible (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. (See Final PEIR, Vol. II, Chapter 2, § 2.4, Figure 2-1.) This area is called the “treatable landscape.” The proposed target of 250,000 annual acres of treatment would occur within the 20.3 million acres of treatable landscape, as described in Section 2.3.2 of the PEIR, “Proposed CalVTP Implementation.”

(See Final PEIR, Vol. II, Chapter 2, § 2.4.)

## 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 Governor’s Executive Order B-52-18, which results in a 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 Public Resources Code (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.

(See Final PEIR, Vol. II, Chapter 2, § 2.2.)

## proGRAM description

The CalVTP is proposed by the Board to treat vegetation that could become fire fuel. The purpose of the CalVTP is to serve as one component of the state’s range of actions to reduce wildfire risk and diminish or avoid the harmful effects of wildfire on people, property, and natural resources within the California Department of Forestry and Fire Protection’s (CAL FIRE’s) State Responsibility Area (SRA). The SRA is an area of more than 31 million acres of private and public land. (See Final PEIR, Vol. II, Chapter 1, Figure 1-1.) The treatable landscape, which is the portion of the SRA where vegetation conditions are suitable for treatment, consists of approximately 20.3 million acres. As part of the CalVTP, CAL FIRE and other project proponents would implement vegetation treatment activities on up to approximately 250,000 acres annually within the treatable landscape. The 250,000-acre annual target is necessary to help meet the Governor’s goals in response to California’s wildfire crisis.

The CalVTP consists of three treatment types: wildland-urban interface (WUI) fuel reduction, fuel breaks, and ecological restoration. The vegetation treatment activities proposed to implement each of these treatment types are prescribed burning, manual treatment, mechanical treatment, prescribed herbivory, and targeted ground application of herbicides.

(See Final PEIR, Vol. II, Chapter 2.)

# environmental review process

In accordance with section 15082 of the CEQA Guidelines, the Board issued a Notice of Preparation (NOP) for the CalVTP on January 30, 2019, to responsible agencies, trustee agencies, interested parties and organizations, and individuals that could have interest in the program, including public agency landowners owning 1,000 acres or more within the treatable landscape. The NOP was available online at https://bof.fire.ca.gov/projects-and-programs/calvtp/. The Board followed required procedures with regard to distribution of the appropriate notices and environmental documents to the State Clearinghouse. The State Clearinghouse made that information available to interested agencies for review and comment.

The Board held public scoping meetings on February 11 and 19, and March 18, 2019, to provide information on the CalVTP and solicit public input on the scope and content of the PEIR. The scoping meetings were held in three locations throughout the state; Redding, Sacramento, and Ontario. All comments on environmental issues received during the NOP public comment period and at the scoping meetings were considered and addressed in the PEIR.

The Board published the Draft PEIR for a 45-day public and agency review period on June 24, 2019. The Draft PEIR was available for public review at 1416 9th Street, Sacramento, California, and online at: https://bof.fire.ca.gov/projects-and-programs/calvtp/. The review period ended on August 7, 2019. The Board received approximately 90 letters commenting on the Draft PEIR. After reviewing these letters carefully, Board staff determined that none of the comments provided any basis for identifying any new significant impacts or other significant new information that would require recirculation of some or all of the Draft PEIR. The Board provided responses to the timely comments on the Draft PEIR in the Final PEIR.

The Final PEIR was issued on November 27, 2019. The Final PEIR includes both written and oral comments on the PEIR received during the public-review period, responses to those comments, and any revisions to the Draft PEIR warranted in response to public comments. The Draft and Final PEIR comprise the PEIR for the CalVTP.

# record of proceedings

In accordance with Public Resources Code section 21167, subdivision (e), the record of proceedings for the Board’s decision to approve the CalVTP includes the following documents at a minimum:

* The NOP and all other public notices issued by the Board in conjunction with the Draft PEIR, and all comments submitted by agencies or members of the public during the comment period on the NOP;
* The Draft PEIR and all appendices;
* All comments submitted by agencies or members of the public during the comment periods on the Draft PEIR;
* All comments and correspondence submitted to the Board with respect to the CalVTP, including comments submitted subsequent to the release of the Final PEIR;
* The Final PEIR, including responses to comments on the Draft PEIR, and appendices;
* Documents cited or referenced in the Draft PEIR and the Final PEIR;
* All recommendations and findings adopted by the Board in connection with the CalVTP and all documents cited or referred to therein;
* All reports, studies, memoranda, maps, staff reports, or other planning documents relating to the CalVTP prepared by the Board, consultants to the Board, or responsible or trustee agencies with respect to the Board’s compliance with the requirements of CEQA and with respect to the Board’s action on the CalVTP;
* Matters of common knowledge to the Board, including but not limited to federal, state, and local laws and regulations (e.g., Executive Order B-52-18, the State’s Forest Carbon Plan, the 2018 Strategic Fire Plan for California, the California Air Resources Board’s 2017 Climate Change Scoping Plan etc.);
* Any documents expressly cited in these findings, in addition to those cited above; and
* Any other materials required for the record of proceedings by Public Resources Code section 21167.6, subdivision (e).

Pursuant to CEQA Guidelines section 15091, subdivision (e), the documents constituting the record of proceedings are available for review during normal business hours at 1416 9th Street, Room 1506-14, Sacramento, CA 95814. The custodian of these documents is Edith Hannigan, Land Use Planning Program Manager.

# mitigation monitoring and reporting program

A Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the CalVTP and is included in the same Resolution that adopts these Findings. The Board will use the MMRP to track compliance with the CalVTP mitigation measures. The MMRP will remain available for public review during the compliance period. The Final MMRP is attached to and incorporated into the Final PEIR and is approved in conjunction with certification of the PEIR and adoption of these Findings of Fact.

# findings for determinations of no impact or less than significant

The Board has reviewed and considered the information in the Draft PEIR and the Final PEIR addressing potential environmental effects, proposed mitigation measures, and alternatives. The Board, relying on the facts and analysis in the Draft PEIR and the Final PEIR, which were presented to the Board and reviewed and considered prior to any approvals, concurs with the conclusions of the Draft PEIR and the Final PEIR regarding the potential environmental effects of the CalVTP.

The Board concurs with the conclusions in the Final PEIR that all of the following impacts will be less than significant or no impact:

**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
* 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

**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

**Air Quality**

* Impact AQ-2: Expose People to Diesel Particulate Matter Emissions and Related Health Risk
* Impact AQ-3: Expose People to Fugitive Dust Emissions Containing Naturally Occurring Asbestos and Related Health Risk
* Impact AQ-5: Expose People to Objectionable Odors from Diesel Exhaust

**Archaeological, Historical, and Tribal Cultural Resources**

* Impact CUL-1: Cause a Substantial Adverse Change in the Significance of Built Historical Resources
* Impact CUL-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource
* Impact CUL-4: Disturb Human Remains

**Biological Resources**

* Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife
* Impact BIO-7: 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

**Geology, Soils, and Mineral Resources**

* Impact GEO-1: Result in Substantial Erosion or Loss of Topsoil
* Impact GEO-2: Increase Risk of Landslide

**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

**Energy Resources**

* Impact ENG-1: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy

**Hazardous Materials, Public Health and Safety**

* Impact HAZ-1: Create a Significant Health Hazard from the Use of Hazardous Materials
* Impact HAZ-2: Create a Significant Health Hazard from the Use of Herbicides

**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
* 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
* 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
* 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
* Impact HYD-5: Substantially Alter the Existing Drainage Pattern of a Treatment Site or Area

**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
* Impact LU-2: Induce Substantial Unplanned Population Growth

**Noise**

* Impact NOI-1: Result in a Substantial Short-Term Increase in Exterior Ambient Noise Levels During Treatment Implementation
* Impact NOI-2: Result in a Substantial Short-Term Increase in Truck-Generated SENL’s During Treatment Activities

**Recreation**

* Impact REC-1: Directly or Indirectly Disrupt Recreational Activities within Designated Recreation Areas

**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
* Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses

**Public Services, Utilities, ad Service Systems**

* Impact UTIL-1: Result in Physical Impacts Associated with Provision of Sufficient Water Supplies, Including Related Infrastructure Needs
* Impact UTIL-3: Comply with Federal, State, and Local Management and Reduction Goals, Statutes, and Regulations Related to Solid Waste

**Wildlife**

* Impact WIL-1: Substantially Exacerbate Fire Risk and Expose People to Uncontrolled Spread of a Wildfire
* Impact WIL-2: Expose People or Structures to Substantial Risks Related to Post-Fire Flooding or Landslides

**Cumulative**

* Agriculture and Forestry Resources
* Biological Resources
* Geology, Soils, Paleontology, and Mineral Resources
* Energy Resources
* Hazardous Materials, Public Health and Safety
* Hydrology and Water Quality
* Population and Housing
* Noise
* Recreation
* Wildfire

# Significant Effects and mitigation measures

The PEIR identified a number of significant and potentially significant environmental effects (or impacts) that the CalVTP will contribute to or cause. Some of these significant effects can be fully avoided through the adoption of feasible mitigation measures. Other effects, however, cannot be avoided by the adoption of feasible mitigation measures or alternatives and thus will be significant and unavoidable. For reasons set forth in Section 10.2, however, the Board has determined that overriding safety, economic, legal, and other considerations outweigh the significant, unavoidable effects of the CalVTP.

## Findings for impacts mitigated to less than significant

This section includes the CalVTP’s direct and indirect impacts as well as cumulative impacts. The text in this section does not attempt to describe the full analysis of each environmental impact contained in the PEIR. Instead, this section provides a summary description of each impact, describes the applicable mitigation measures identified in the Draft PEIR or Final PEIR and adopted by the Board, and states the Board’s findings on the significance of each impact after imposition of the adopted mitigation measures. A full explanation of these environmental findings and conclusions can be found in the Draft PEIR and Final PEIR, and the Board hereby incorporates by reference into these Findings the discussion and analysis in those documents supporting the Final PEIR’s determinations. In making these Findings, the Board ratifies, adopts, and incorporates into the Findings and analyses and explanations in the Draft PEIR and Final PEIR relating to environmental impacts and mitigation measures, except to the extent any such determinations and conclusions are specifically and expressly modified by these Findings.

The Board has adopted all of the mitigation measures identified herein.

### Biological Resources

(See Final PEIR, Vol. II, Chapter 3.6.)

#### 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 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.

##### **The Following Mitigation Measures are Adopted:**

**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 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. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform the determination of buffer width. If a no-disturbance buffer is reduced below 50 feet from a listed plant, a qualified RPF or botanist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report) with a science-based justification for the deviation. No fire ignition (and associated use of accelerants) will occur within 50 feet of listed plants.

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. For a treatment to be considered beneficial to listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. 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 PEIR) 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 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. Consideration of factors sch as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform an appropriate buffer size and shape.
* 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.
* No fire ignition (and associated use of accelerants) will occur within the special-status plant buffer.

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 treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. 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. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency’s requirements (e.g., permits, approvals) within the plan. 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 in perpetuity, 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 by the project proponent 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 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 and that compensatory plant populations will be preserved in perpetuity.

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 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 the 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.

##### **Significance After Mitigation**: Less than Significant

##### **Finding**: Implementation of Mitigation Measures BIO-1a, 1b, and 1c, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

#### Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications

Treatment activities implemented under the 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 their habitat would be a potentially significant impact.

##### **The Following Mitigation Measures are Adopted:**

**Tree-Nesting and Cavity-Nesting Wildlife**

**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.

Avoid Mortality, Injury, or Disturbance of Individuals

* 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 the occupied habitat such that mortality, injury, or disturbance of the species will not occur, as determined by a qualified RPF or biologist using the most current and commonly-accepted science and considering published agency guidance; 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/NOAA Fisheries 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.

Maintain Habitat Function

* 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; dens; tree snags; large raptor nests [including inactive nests]; downed woody debris; food sources). 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 and the most current, commonly accepted science.
* 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 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/NOAA Fisheries 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 PEIR) 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.

Avoid Mortality, Injury, or Disturbance of Individuals

* 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 using the most current, commonly accepted science and will consider published agency guidance; 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 species’ tolerance to disturbance; 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 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. If a no-disturbance buffer is reduced below 100 feet from an occupied site, a qualified RPF or biologist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report).

* 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 will be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment. 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. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in mortality, injury or disturbance to special-status species.
* 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.

Maintain Habitat Function

* 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 species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science.
* 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 non-listed 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. For a treatment to be considered beneficial to non-listed special-status wildlife, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources). If it is determined that treatment activities would be beneficial to special-status wildlife, no compensatory mitigation will be required. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding the determination that a non-listed special-status species would benefit from the treatment.

**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 or BIO-2b 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 existing habitat within the treatment area or outside of the treatment area (including decommissioning roads, adding perching structures, removing existing perching structures, or removing existing movement barriers or other existing 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 and that compensatory habitat will be preserved in perpetuity.
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:

* The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency’s requirements (e.g., permits, approvals) within the plan.
* 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/NOAA Fisheries 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 current version, including updated natural communities data at http://vegetation.cnps.org/) 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 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 or current version, including updated natural communities data at http://vegetation.cnps.org/). 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 relative 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 or current version, including updated natural communities data at http://vegetation.cnps.org/).
* 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.

The feasibility of implementing the avoidance measures will be determined by the project proponent based on whether implementation of this mitigation measure will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. If the avoidance measures are determined by the project proponent to be infeasible, the project proponent will document the reasons implementation of the avoidance strategies are infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report).

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. For a treatment to be considered beneficial to a sensitive natural community or oak woodland, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the community (or similar community) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. 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 values 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 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 and that compensatory habitat will be preserved in perpetuity.

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 or enhanced habitat.

The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency’s requirements (e.g., permits, approvals) within the plan.

**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 values 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.
* 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 and that compensatory plant populations will be preserved in perpetuity.

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 or enhanced habitat.

The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency’s requirements (e.g., permits, approvals) within the plan. 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.

##### **Significance After Mitigation: Less than Significant**

##### **Finding:** Implementation of Mitigation Measures BIO-2a, 2b, 2c, 3a, 3b, and 3c, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

**Shrub-Nesting Wildlife**

**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):** 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 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, biologist, or biological technician familiar with valley elderberry longhorn beetle and its life history will monitor the work area to verify the avoidance and minimization measures are implemented. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to valley elderberry longhorn beetle.

If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of VELB 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-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**

##### **Significance After Mitigation:** Less than Significant

##### **Finding:** Implementation of Mitigation Measures BIO-2a, 2b, 2c, 2d, 3a, 3b, and 3c, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

**Ground-Nesting Wildlife**

**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**

##### **Significance After Mitigation:** Less than Significant

##### **Finding:** Implementation of Mitigation Measures BIO-2a, 2b, 2c, 3a, 3b, and 3c, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

**Burrowing or Denning Wildlife**

**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**

##### **Significance After Mitigation:** Less than Significant

##### **Finding:** Implementation of Mitigation Measures BIO-2a, 2b, 2c, 3a, 3b, and 3c, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

**Insects and Other Terrestrial Invertebrates**

**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, 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 suitable 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 species would benefit from treatment in the occupied habitat area even though some may be killed, injured or disturbed during treatment activities. For a treatment to be considered beneficial to special-status butterfly species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status butterflies, no compensatory mitigation will be required.

**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.
* 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 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 species 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. For a treatment to be considered beneficial to special-status bumble bee species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. 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**

##### **Significance After Mitigation:** Less than Significant

##### With respect to special-status bumble bees, however, because the extent and severity of impacts from vegetation treatment cannot be predicted with meaningful certainty, the Board addresses this potential impact in section 8.2.4, below.

##### **Finding:** Implementation of Mitigation Measures BIO-2a, 2b, 2c, 2d, 2e, 2f, and 2g, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

**Bats**

**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**

##### **Significance After Mitigation:** Less than Significant

##### **Finding:** Implementation of Mitigation Measures BIO-2a, 2b, 2c, 3a, 3b, and 3c, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

**Ungulates**

**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**

##### **Significance After Mitigation:** Less than Significant

##### **Finding:** Implementation of Mitigation Measures BIO-2a, 2b, 2c, 2h, 3a, 3b, and 3c, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

**Fish and Aquatic Invertebrates**

**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:** 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.
* 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.
* No fire ignition (and associated use of accelerants) will occur within the wetland buffer.

##### **Significance After Mitigation:** Less than Significant

##### **Finding:** Implementation of Mitigation Measures BIO-2a, 2b, 2c, 3a, 3b, 3c, and 4, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

**Amphibians and Reptiles**

**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**

##### **Significance After Mitigation**: Less than Significant

##### **Finding**: Implementation of Mitigation Measures BIO-2a, 2b, 2c, 3a, 3b, 3c, and 4, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

#### 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 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.

##### **The Following Mitigation Measures are Adopted:**

**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**

##### **Significance After Mitigation**: Less than Significant

##### **Finding:** Implementation of Mitigation Measures BIO-3a, 3b, and 3c, which have been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that these mitigation measures be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

#### 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.

##### **The Following Mitigation Measure is Adopted:**

**Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands**

##### **Significance After Mitigation**: Less than Significant

##### **Finding:** Implementation of Mitigation Measure BIO-4, which has been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

#### 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 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.

##### **The Following Mitigation Measure is Adopted:**

**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 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 effectiveness of the non-disturbance buffer around the nursery site by a qualified RPF, biologist, 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. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to special-status species.

##### **Significance After Mitigation:** Less than Significant

##### **Finding**: Implementation of Mitigation Measure BIO-5, which has been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

### Hazardous Materials, Public Health and Safety

(See Final PEIR, Vol. II, Chapter 3.10.)

#### 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.

##### **The Following Mitigation Measure is Adopted:**

**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.

##### **Significance After Mitigation**: Less than Significant

##### **Finding:** Implementation of Mitigation Measure HAZ-3, which has been required or incorporated into the Program, will reduce this impact to a less than significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that avoid the significant environmental effects as identified in the PEIR.

## Findings for significant and unavoidable impacts

This section includes the CalVTP’s direct and indirect impacts, and cumulative impacts. The text in this section does not attempt to describe the full analysis of each environmental impact contained in the PEIR. Instead, this section provides a summary description of each impact, describes the applicable mitigation measures identified in the Draft and Final PEIR and adopted by the Board, and states the Board’s findings on the significance of each impact after imposition of the adopted mitigation measures. A full explanation of these environmental findings and conclusions can be found in the Draft and Final PEIR, and the Board hereby incorporates by reference into these Findings the discussion and analysis in those documents supporting the PEIR’s determinations. In making these Findings, the Board ratifies, adopts, and incorporates into these Findings and analyses and explanations in the Draft PEIR and Final PEIR relating to environmental impacts and mitigation measures, except to the extent any such determination and conclusions are specifically and expressly modified by these Findings.

The Board has adopted all of the mitigation measures identified herein. The Board has considered all mitigation measures suggested in comments on the Draft PEIR, and rejects as infeasible those suggestions that are not otherwise incorporated herein, as reflected in the Resolution adopted by the Board adopting the CalVTP.

### Aesthetics and Visual Resources

(See Final PEIR, Vol. II, Chapter 3.2.)

#### 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 is a potentially significant impact.

##### **The Following Mitigation Measure is Adopted:**

**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 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.

##### **Significance After Mitigation:** Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure AES-3, which has been required or incorporated into the Program, will reduce the severity of this impact, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure AES-3 to reduce this impact. The Board has reviewed any suggested mitigation measures and finds these suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the significant unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

### Air Quality

(See Final PEIR, Vol. II, Chapter 3.4.)

#### 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, PM10, and PM2.5 in areas where people reside and 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 significantimpact.

##### **The Following Mitigation Measure is Adopted:**

**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.

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 NOX and PM.

##### **Significance After Mitigation:** Potentially Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure AQ-1, which has been required or incorporated into the Program, will reduce the severity of this impact, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure AQ-1 to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the significant unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

#### 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 is a potentially significant impact.

No feasible mitigation measures are available.

##### **Significance After Mitigation:** Potentially Significant and Unavoidable

##### **Finding:** The Board has incorporated all feasible measures to prevent and minimize this potential impact pursuant to SPR AQ-2 and SPR AQ-6, and SPR AQ-4. The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the Program’s benefits outweigh the significant unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

#### 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 is a potentially significant impact.

No feasible mitigation measures are available.

##### **Significance After Mitigation:** Potentially Significant and Unavoidable

##### **Finding:** The Board has incorporated all feasible measures to prevent and minimize this potential impact pursuant to SPR AQ-2, SPR AQ-6, and SPR AQ-4. The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the Program’s benefits outweigh the significant and unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

### Archaeological, Historical, and Tribal Cultural Resources

(See Final PEIR, Vol. II, Chapter 3.5.)

#### 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 is a potentially significant impact.

##### **The Following Mitigation Measure is Adopted:**

**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 archaeologist 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 applicable state or local agency procedures. 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.

##### **Significance After Mitigation:** Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure CUL-2, which has been required or incorporated into the Program, will reduce the severity of this impact, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure CUL-2 to reduce this impact. The Board has reviewed any suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the significant unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

### Biological Resources

(See Final PEIR, Vol. II, Chapter 3.6.)

#### impact bio-2: Substantially Affect Special-Status Bumble Bees Either Directly or Through Habitat Modification

There is little known about the life history characteristics and behaviors of special-status bumble bees. Additionally, their presence is difficult to detect. While there is much to be learned about the special-status bumble bee colonies, they are generally believed to overwinter near the ground surface in loose soil or under leaf litter or other debris. Nests for special-status bumble bees typically occur in abandoned rodent burrows or other animal nests, but may also occur in above-ground cavities. There is no established methodology for detecting overwintering or nesting colonies of these species. The sizes of the colonies for these species are not well documented; however, western bumble bee colonies can contain over 1,600 workers and produce up to 360 new queens (Xerces Society et al. 2018).

There is evidence of widespread population declines, which led in part to the recent determination by CDFW to designate four bumble bees as Candidate species for listing under CESA. Primary threats to the survival of special-status bumble bees include habitat loss or modification due to development, agriculture, high-intensity fire, fire suppression, and herbicide use (Xerces Society et al. 2018). As described above, herbicide use under the CalVTP may exacerbate threats to special-status bumble bees. Pursuant to its objectives, implementation of the CalVTP is intended to reduce the occurrence of high-intensity wildfire and modify past practices of fire suppression, which could beneficially decrease an existing threat to special-status bumble bees. Although Mitigation Measure BIO-2g would reduce impacts to foraging special-status bumble bees and their floral resources, substantial adverse effects could still occur to special-status bumble bee species during nesting and overwintering, because vegetation treatment activities, such as prescribed burning, soil disturbance, or use of heavy equipment, could kill individuals or crush or disturb overwintering or nesting colonies. Because little is known about the potential nesting and overwintering behavior and habitat for these species, many habitat types within the species range may be suitable with the presence of nesting or overwintering substrate (e.g., loose soil or under leaf litter or other debris). Additionally, there is no established methodology for detecting overwintering or nesting colonies of these species. Because these species have not yet been well studied and colonies are likely difficult to detect, there is little evidence to guide effective impact avoidance or minimization strategies to protect nesting or overwintering colonies. Mitigation Measure BIO-2g presents feasible impact avoidance and minimization measures that are based on emerging, early understanding of species protection; as their candidacy for listing is reviewed by CDFW, additional guidance may emerge and could be implemented by project proponents to reduce impacts. Project proponents can and should stay abreast of new information, as research and scientific understanding evolve. However, with the current state of the science and species knowledge, if underground colonies cannot be detected, they cannot be avoided and, in this case, the extent and severity of impacts to special-status bumble bees from vegetation treatment cannot be predicted with meaningful certainty. Therefore, given the rarity of these candidate species, if colonies were to be destroyed, it is possible that populations of these species would be reduced below self-sustaining levels, and treatment activities could substantially reduce the number or restrict the range of species. Over time, as avoidance strategies are developed with research and improved scientific understanding, adequate protection of the species may become feasible. However, at this time, recognizing the difficulty in detecting overwintering and nesting bumble bees and determining the occurrence and severity of impacts, for purposes of good faith, full disclosure under CEQA, this impact is designated as potentially significant and unavoidable.

##### **The Following Mitigation Measure is Adopted:**

**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.
* 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 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 species 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. For a treatment to be considered beneficial to special-status bumble bee species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status bumble bees, no compensatory mitigation will be required.

##### **Significance After Mitigation:** Potentially Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure BIO-2g, which has been required or incorporated into the Program, will reduce the severity of this impact, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure BIO-2g to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the significant unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

### Greenhouse Gas Emissions

(See Final PEIR, Vol. II, Chapter 3.8.)

#### 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. However, there is uncertainty in predicting future wildfire occurrence, emissions, and carbon sequestration rates, which are highly variable depending on many factors. Future wildfire intensities and carbon sequestration in treated areas are the subjects of continued scientific research and debate. To 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.

##### **The Following Mitigation Measure is Adopted:**

**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;
* 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.

As the science evolves, other feasible methods or technologies to sequester carbon could be incorporated, such as conservation burning, a technique for burning woody material that reduces the production of smoke particulates and carbon released into the atmosphere and generates more biochar. Biochar is produced from the material left over after the burn and spread with compost to increase soil organic matter and soil carbon sequestration. Technologies to reduce greenhouse gas emissions may also include portable units that perform gasification to produce electricity or pyrolysis that produces biooil that can be used as liquid fuel and/or syngas that can be used to generate electricity.

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.

##### **Significance After Mitigation:** Potentially Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure GHG-2, which has been required or incorporated into the Program, will reduce the severity of this impact, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure GHG-2 to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the significant unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

### Transportation

(See Final PEIR, Vol. II, Chapter 3.15.)

#### impact tran-3: result in a net increase in vmt for the proposed calvtp

Under the 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, the 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.

No feasible mitigation measures are available.

##### **Significance After Mitigation:** Potentially Significant and Unavoidable

##### **Finding:** The Board has incorporated all feasible measures to prevent and minimize this potential impact. The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the Program’s benefits outweigh the significant and unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

### Public Services, Utilities, and Service Systems

(See Final PEIR, Vol. II, Chapter 3.16.)

#### 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 will 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 processing will 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, the 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.

No feasible mitigation measures are available.

##### **Significance After Mitigation:** Potentially Significant and Unavoidable

##### **Finding:** The Board has incorporated all feasible measures to prevent and minimize this potential impact. The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the Program’s benefits outweigh the significant and unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

### Cumulative

(See Final PEIR, Vol. II, Chapter 4.)

#### aesthetics

Implementation of non-shaded fuel breaks would contribute considerably to cumulative visual impacts. Non-shaded fuel breaks remove all vegetation, which could lead to a long-term adverse change in the landscape by resulting in a contrasting linear element in an otherwise natural environment. As described in Impact AES-3, implementing Mitigation Measure AES-3 may reduce the visual impact as it requires a visual reconnaissance of proposed treatment areas to observe the surrounding landscape and determine if public viewing locations, including heavily trafficked scenic vistas, recreation areas and trails, and state scenic highways, have views of the proposed treatment area. If none are identified, the non-shaded fuel break would be implemented without additional visual mitigation. If the project proponent identifies public viewing points, including scenic vistas, recreation areas and trails, and state scenic highways with lengthy views (i.e., more than a few seconds) of a proposed non-shaded fuel break treatment area, the project proponent would modify the location of the fuel break to reduce its visibility from public viewpoints while achieving the wildfire risk reduction objectives of the fuel break, if feasible. If other feasible locations do not exist that would reduce impacts to public viewers and achieve the intended wildfire risk reduction requirements of the fuel break, the project proponent would also evaluate if implementing a shaded fuel break rather than a non-shaded fuel break would be feasible. Because of the strategic nature of non-shaded fuel break siting, it may be infeasible to relocate a non-shaded fuel break to avoid public visibility and still maintain its wildfire risk reduction purpose. Further, converting a planned non-shaded fuel break to a shaded fuel break may be infeasible because a shaded fuel break would not achieve the objectives of the fuel break. If Mitigation Measure AES-3 would not resolve the visual impact, the CalVTP’s contribution to this impact would be cumulatively considerable. Therefore, the CalVTP’s contribution to a cumulative visual impactwould remain cumulatively considerable.

##### **The Following Mitigation Measure is Adopted:**

**Mitigation Measure AES-3: Conduct Visual Reconnaissance for Non-Shaded Fuel Breaks and Relocate or Feather and Screen Publicly Visible Non-Shaded Fuel Breaks**

##### **Significance After Mitigation:** Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure AES-3, which has been required or incorporated into the Program, will reduce the severity of this impact, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure AES-3 to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the cumulatively considerable impacts of the Program, as set forth in the Statement of Overriding Considerations

#### air quality

As discussed under Impact AQ-1, treatment activities would generate levels of criteria air pollutants and precursors, particularly oxides of nitrogen (NOX), reactive organic gases (ROG), PM10, and PM2.5, that would exceed the mass emission–based significance thresholds in multiple air districts, and in multiple air basins. Because these emissions can move relatively freely within an air basin, they would be present both inside and outside the treatable landscape. Implementation of Mitigation Measure AQ-1 would require project proponents to implement emission reduction techniques where feasible, which would reduce emissions generated during treatment activities. However, the levels of criteria air pollutants and precursors emitted by treatment activities could still exceed the mass emissions thresholds recommended by local air districts, and therefore, the CalVTP’s contribution to the nonattainment status of criteria air pollutants in some air basins in California would be cumulatively considerable. Under some meteorological conditions, some of the criteria air pollutants and precursors emitted in one air basin could transport to an adjacent air basin. Mitigation Measure AQ-1 would not reduce mass emissions of criteria air pollutants and precursors to less than the mass emission significance thresholds established by air districts with jurisdiction in the treatable landscape. Therefore, the CalVTP’s contribution to the nonattainment status of criteria air pollutants in some or all air basins in California would remain cumulatively considerable.

TACs contained in smoke generated by prescribed burns, which are discussed under Impact AQ-4, could expose receptors to an acute, short-term health risk with a Hazard Index greater than 1.0; the CalVTP’s contribution to health risks from TAC exposure would be cumulatively considerable.

As discussed under Impact AQ-6, odors contained in smoke generated by prescribed burning could be considered objectionable and could expose a substantial number of people, thereby resulting in a cumulatively considerable contribution to odors. Feasible measures are not available to further prevent people from being exposed to odiferous smoke. Therefore, the CalVTP’s contribution to odors from smoke exposure would be cumulatively considerable.

##### **The Following Mitigation Measure is Adopted:**

**Mitigation Measure AQ-1: Implement On-Road Vehicle and Off-Road Equipment Exhaust Emission Reduction Techniques**

##### **Significance After Mitigation:** Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure AQ-1, which has been required or incorporated into the Program, will reduce the severity of cumulative air quality impacts, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure AQ-1 to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the cumulatively considerable impacts of the Program, as set forth in the Statement of Overriding Considerations.

#### archaeological, historic, and tribal cultural resources

In regard to inadvertent discovery of an unknown unique archaeological or subsurface historical resource, implementation of Mitigation Measure CUL-2 would protect in place, record, or otherwise treat the discovered resource appropriately to reduce the CalVTP’s contribution. However, given the large geographic extent of the treatable landscape, the wide variety in resource types and significance, the potential extent of damage during inadvertent excavation, it is uncertain whether this measure would avoid a substantial adverse change in the significance of a unique archaeological or subsurface historical resource. Although SPRs would require every reasonable effort to identify and protect resources, there could be some rare instances where inadvertent damage of unknown resources may be extensive and a substantial adverse change in the significance of the resource may not be fully mitigated. Therefore, the CalVTP’s contribution to a cumulative impact related to unknown unique archaeological or subsurface historical resources would be cumulatively considerable, and this impact would be significant and unavoidable.

No additional feasible mitigation beyond Mitigation Measure CUL-2 is available to reduce the CalVTP’s contribution to cumulative degradation of unique archaeological or subsurface historical resource.

##### **The Following Mitigation Measure is Adopted:**

**Mitigation Measure CUL-2: Protect Inadvertent Discoveries of Unique Archaeological Resources or Subsurface Historical Resources**

##### **Significance After Mitigation:** Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure CUL-2, which has been required or incorporated into the Program, will reduce the severity of cumulative impacts to archaeological, historic, and tribal cultural resources, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure CUL-2 to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the cumulatively considerable impacts of the Program, as set forth in the Statement of Overriding Considerations.

#### Biological resources

Due to evidence of widespread population declines, the endangered or critically endangered status assigned by the International Union for Conservation of Nature, and extensive public comments, the California Fish and Game Commission voted in June 2019 to accept a petition to list four bumble bee species (Crotch bumble bee, Franklin’s bumble bee, Suckley cuckoo bumble bee, and western bumble bee) for protection under CESA. The factors that pose a threat to the survival of these special-status bumble bees include habitat loss or modification due to agriculture, development, high-intensity fire, fire suppression, and herbicide use; disease; and climate change (Xerces Society et al. 2018). Vegetation treatment under the proposed CalVTP would remove floral resources for special-status bumble bees and prescribed burning, soil disturbance, or use of heavy equipment could kill individuals or crush or disturb overwintering or nesting colonies. This contribution to ongoing loss of individuals and degradation of habitat would be cumulatively considerable. Mitigation Measure BIO-2g would reduce potential impacts on special-status bumble bees by requiring avoidance of prescribed burning and herbicide treatment within the flight season and retention of suitable habitat in the range of these species or compensation for unavoidable loss of special-status bumble bees or habitat function. These species have not yet been well studied and nesting and overwintering colonies are difficult to detect. With the current state of the science and limited knowledge of the species’ life history and behaviors, if underground colonies cannot be detected, they cannot be avoided and, it is possible that populations of these species would be reduced below self-sustaining levels, and treatment activities could substantially reduce the number or restrict the range of species. Therefore, despite implementation of mitigation, the CalVTP’s contribution to impacts to special-status bees would remain cumulatively considerable.

##### **The Following Mitigation Measure is Adopted:**

**Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees (All Treatment Activities)**

##### **Significance After Mitigation:** Significant and Unavoidable

##### **Finding:** Implementation of Mitigation Measure BIO-2g, which has been required or incorporated into the Program, will reduce the severity of cumulative impacts to biological resources, but not to a less-than-significant level. The Board hereby directs that this mitigation measure be adopted. The Board therefore finds that changes or alterations have been required in, or incorporated into, the Program that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR.

##### The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures beyond Mitigation Measure BIO-2g to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the benefits of the CalVTP outweigh the cumulatively considerable impacts of the Program, as set forth in the Statement of Overriding Considerations.

#### Public services, utilities and service systems

The analysis in Impact UTIL-2, the volume of solid organic waste transported offsite to existing biomass power plants, wood product processing facilities, and/or composting facilities for processing could exceed existing infrastructure capacity. Although, additional infrastructure and market demand for the processing of organic materials is expected to increase in the near future, it is too speculative to assume that this expansion of infrastructure capacity would occur consistent with the increase in pace and scale of vegetation treatments under the CalVTP. Therefore, the CalVTP’s contribution of additional solid organic waste to facilities without adequate capacity to process it would be cumulatively considerable.

No feasible mitigation measures are available that do not conflict with the purpose of the CalVTP to reduce wildfire risk in compliance with mandates to increase the pace and scale of vegetation treatments.

##### **Significance After Mitigation:** Significant and Unavoidable

##### **Finding:** The Board has incorporated all feasible measures to prevent and minimize this potential impact. The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the Program’s benefits outweigh the significant and unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

#### Transportation

The analysis in Impact TRAN-3 addresses vehicle miles travelled (VMT) annually from the whole of the CalVTP, and thus is inherently cumulative and reflects a cumulative significance determination. Implementation of the CalVTP could potentially result in a net increase in VMT and a significant cumulative impact related to VMT. Additionally, as stated under Impact TRAN-3, there is no additional feasible mitigation to address the potential increases in VMT generated under the CalVTP. Therefore, the CalVTP’s contribution to a significant cumulative impact related to VMT would be cumulatively considerable, in spite of the recognition that a net VMT reduction could be reasonably expected to occur in the long term and individual vegetation treatments would likely be less than significant pursuant to the thresholds identified in OPR’s Technical Advisory on Evaluating Transportation Impacts, which would reduce the CalVTP’s contribution to cumulative impacts.

No feasible mitigation measures are available.

##### **Significance After Mitigation:** Significant and Unavoidable

##### **Finding:** The Board has incorporated all feasible measures to prevent and minimize this potential impact. The Board finds that fully mitigating this impact is not feasible; there are no feasible mitigation measures to reduce this impact. The Board has reviewed all suggested mitigation measures and finds the suggestions infeasible. This impact will remain significant and unavoidable. The Board concludes, however, that the Program’s benefits outweigh the significant and unavoidable impacts of the Program, as set forth in the Statement of Overriding Considerations.

# project alternatives

## basis for alterantives-feasibility analysis

Public Resources Code section 21002 provides that “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects[.]” The same statute states that the procedures required by CEQA “are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.”

Where a lead agency has determined that, even after the adoption of all feasible mitigation measures, a project as proposed will still cause one or more significant environmental effects that cannot be substantially lessened or avoided, the agency, prior to approving the project as mitigated, must first determine whether, with respect to such impacts, there remain any project alternatives that are both environmentally superior and feasible within the meaning of CEQA. Although an EIR must evaluate this range of *potentially* feasible alternatives, an alternative may ultimately be deemed by the lead agency to be “infeasible” if it fails to fully promote the lead agency’s underlying goals and objectives with respect to the project. (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 999–1000 (*CNPS*); *Citizens for Open Government v. City of Lodi* (2012) 205 Cal.App.4th 296, 314–315; *City of Del Mar v. City of San Diego* (1983) 133 Cal.App.3d 401, 417; *Los Angeles Conservancy v. City of West Hollywood* (2017) 18 Cal.App.5th 1031, 1041-1043.) “‘Feasibility’ under CEQA encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors.” (*Ibid*.; see also *CNPS*, *supra*, 177 Cal.App.4th at p. 1001.) Thus, even if a project alternative will avoid or substantially lessen any of the significant environmental effects of the project, the decision-makers may reject the alternative if they determine that specific considerations make the alternative infeasible.

Under CEQA Guidelines section 15126.6, the alternatives to be discussed in detail in an EIR should be able to “feasibly attain most of the basic objectives of the project[.]” For this reason, the project objectives described above provided the framework for defining possible project alternatives. (See *In re Bay-Delta* (2008) 43 Cal.4th 1143, 1166.) Alternatives also were evaluated based on general feasibility criteria suggested by the CEQA Guidelines.

Based on the requirements of CEQA Guidelines section 15126.6 and the Project’s Objectives, the following alternatives to the Program were identified:

**No Program Alternative**

**Alternative A: Reduced Scale of Treatments**

**Alternative B: WUI Fuel Reduction Only**

**Alternative C: Modified WUI Fuel Reduction and Fuel Breaks**

**Alternative D: No Prescribed Burning Treatments**

**Alternative E: No Herbicide Treatments**

The Board finds that a good-faith effort was made in the PEIR to evaluate a reasonable range of alternatives that could feasibly attain most of the basic objectives of the Program but that would avoid or substantially lessen any of the significant effects of the CalVTP, even when the alternatives might impede the attainment of the Project objectives and might be more costly. As a result, the scope of alternatives analyzed in the PEIR is not unduly limited or narrow. (See Final PEIR, Vol. II, Chapter 6.)

### Significant and Unavoidable Impacts of the Project

Section 8.2 of these Findings of Fact sets forth all of the significant effects associated with the CalVTP, along with all of the adopted mitigation measures aimed at reducing the severity of those significant effects. In some instances, the adopted mitigation measures will reduce impacts to less than significant levels. In other instances, however, the significant impacts will still remain significant (and thus unavoidable) even after the adoption of all feasible mitigation measures. These significant unavoidable impacts are briefly summarized below:

#### aesthetics & visual resources

(Final PEIR, Vol. II, Chapter 3, § 3.2.3.)

##### 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.

Non-shaded fuel breaks would be established in strategic locations, typically where there is a natural change in vegetation type, to reduce fire spread to structures and natural resources and to provide access for fire suppression efforts. Because of the strategic nature of non-shaded fuel break siting, it may be infeasible to relocate a non-shaded fuel break to avoid public visibility, per Mitigation Measure AES-3. Further, converting a planned non-shaded fuel break to a shaded fuel break may not achieve the wildfire risk reduction objectives of the fuel break and vegetation feathering techniques may not fully and effectively mitigate the adverse visual impact from implementation of a non-shaded fuel break to public viewers. Therefore, if Mitigation Measure AES-3 is necessary to reduce a potentially significant impact and cannot be implemented in a way that would feasibly reduce the visual impact below significance, a 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 could be unavoidable. Accordingly, the impact, if it occurs, remains significant and unavoidable.

#### Air quality

(Final PEIR, Vol. II, Chapter 3, § 3.4.3.)

##### 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, PM10, and PM2.5 in areas where people reside and 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.

Mitigation Measure AQ-1 would reduce the mass emissions criteria air pollutants and precursors generated by use of on-road vehicles and off-road equipment during treatment activities. Given the potential infeasibility of implementing specific emission reduction techniques and the uncertainties associated with treatment activity location, size, and timing, the emission reductions from implementation of Mitigation Measure AQ-1 cannot be meaningfully quantified. Thus, depending on the number of acres that would undergo treatment on the same day (or same year) within the same air basin, the potential remains that levels of criteria air pollutants and precursors emitted by treatment activities could still exceed the mass emissions thresholds recommended by local air districts, thereby resulting in, or contributing to, exceedances of the NAAQS and CAAQS in air basins.

Mitigation Measure AQ-1 would not reduce the potential for treatment-related vehicle travel on unpaved roads to result in, or contribute to, localized concentrations of PM10 and PM2.5 that exceed applicable NAAQS and CAAQS.

While implementation of Mitigation Measure AQ-1 would reduce emissions and the resultant exposure to health effects, the amount of the reduction cannot be determined because of the variables described above; therefore, the potential remains that localized exceedances of the NAAQS and CAAQS for CO, PM10, and PM2.5 and associated adverse health effects to exposed people could occur and this impact remains potentially significant and unavoidable.

##### AQ-4: Expose People to Toxic Air Contaminants Emitted by Prescribed Burns and Related Health Risk

The increase in prescribed burn activity under the CalVTP would not result in the long-term exposure of TAC-containing smoke to residences or other places where people spend time and, therefore, is not anticipated to expose any people to a level of chronic, noncarcinogenic risk that exceeds a Hazard Index of 1.0 or to an incremental increase in cancer risk that exceeds 10 in on million. However, despite adherence to all the safety measures in the SMP and IAP, unpredictable changes in weather can occur during prescribed burns; if this occurred, it could result in the short-term exposure of residences and places where people spend time to concentrations of TACs and associated levels of acute health risk with a Hazard Index greater than 1.0.

As discussed in Section 3.4.2, “Environmental Setting,” wildfires are a large source of TACs, and represent a greater public health concern than prescribed burns due to their uncontrolled nature and longer duration. Wildfires may last for weeks or even months, potentially resulting in a longer exposure of receptors to TACs from smoke emissions over a broad geography. Most critically, wildfires often burn structures in addition to vegetation, releasing a wider array of chlorinated and other toxic compounds not present in prescribed burns that could cause adverse health effects when inhaled (NWCG 2018). Given the unpredictability of wildfire, the variability in TAC emission characteristics of wildfire fuels (i.e., grass-type, shrub-type, tree-type, structures), and the possible variability in TAC emissions during prescribed burns under the CalVTP, evaluating the net effect of the CalVTP on TAC exposure associated with wildfire and wildfire response is not possible, nor is it pertinent to determining the significance of short-term exposure to TACs under CEQA. This information is presented to explain the broader context for consideration of fire-related emissions in California, within which treatment emissions would occur.

The Board has incorporated all feasible mitigation measures to prevent and minimize smoke emissions as part of the precautionary measures required in Smoke Management Plans, pursuant to SPR AQ-2, and in Incident Action Plans and other burn safety procedures, pursuant to SPR AQ-6, for the unintended occurrence of when a prescribed burn may go out of prescription and adversely affect offsite receptors. Additionally, SPR AD-4 will alert the public to planned prescribed burns and give them adequate notice to take precautionary measures such as using respirators, closing windows, or temporarily vacating the area to reduce the potential for exposure; considering actions taken by the public to reduce exposure to smoke from prescribed burns are voluntary, there are no additional feasible methods to compel the public to reduce its exposure. Although all feasible precautions and notifications have been included in standard project requirements, the potential remains that short-term exposure to TACs from unpredictable weather changes could occur. Therefore, this impact is potentially significant and unavoidable.

##### AQ-6: Expose People to Objectionable Odors from Smoke During Prescribed Burning

Prescribed burns and pile burning conducted under the CalVTP could result in temporary odorous smoke emissions, which could be perceived as objectionable depending on the frequency and intensity of the resultant smoke, wind speed and direction, and the proximity and sensitivity of exposed individuals.

Per SPR AQ-2, and as discussed in Section 3.4.1, “Regulatory Setting,” prescribed burning implemented under the CalVTP will be conducted in accordance with local air district regulations regarding open burning and in accordance with requirements of the California Smoke Management Program. SMPs are intended to reduce smoke impacts from prescribed burning and must include basic information such as the location, types, and amounts of material to be burned; expected duration of the fire; identification of responsible personnel; and identification of all smoke-sensitive areas. Larger burns require additional information such as meteorological conditions necessary for burning, projections of where the smoke is expected to travel (both day and night), contingency actions to be taken if smoke impacts occur or meteorological conditions deviate from those specified in the SMP, and monitoring. Additionally, treatments implemented under the CalVTP will generally be in less populated, rural, or undeveloped areas, where people are sparse. Furthermore, as discussed in Section 2.5.2, “Description of Treatment Activities,” prescribed burns could be conducted at 10- to 15-year intervals to maintain low fuel hazard dependent on vegetation type, climate type, and soil type. Therefore, exposure of the same people in any given location to odorous smoke emissions would occur infrequently over a period of a few days to weeks, with the possibility of recurring every 10- to 15-years. As discussed in Impact AQ-4, when in prescription, prescribed burns would not expose receptors to smoke and associated odors.

However, despite adherence to an SMP, low likelihood of substantial numbers of people near prescribed burns, and infrequent occurrence of prescribed burns, there is no guarantee that smoke from every prescribed burn would behave as predicted and that a substantial number of people would not be exposed to smoke odors. Therefore, prescribed burns implemented under the CalVTP have the potential to expose a substantial number of people to odorous smoke emissions.

As discussed in Section 3.4.2, “Environmental Setting,” wildfires are a large source of smoke, and represent a greater odor source due to their uncontrolled nature and longer duration. Wildfires may last for weeks or even months, potentially resulting in a longer exposure of receptors to objectionable odors from smoke. Most critically, wildfires often burn structures in addition to vegetation, releasing a wider array of odorous emissions not present in prescribed burns that only combust vegetation. Given the unpredictability of wildfire, evaluating the net effect of the CalVTP on odors associated with wildfire is not possible, nor is it pertinent to determining the significance of short-term exposure to smoke-related odors under CEQA.

The Board and CAL FIRE have incorporated all feasible measures to prevent and minimize smoke emissions as part of the precautionary measures the Board/CAL FIRE will require in Smoke Management Plans, pursuant to SPR AQ-2, and in Incident Action Plans and other burn safety procedures, pursuant to SPR AQ-6, for the unintended occurrence of when a prescribed burn may go out of prescription and adversely affect offsite receptors. Additionally, SPR AD-4 will alert the public to planned prescribed burns and give them adequate notice to take precautionary measures such as closing windows or temporarily vacating the area to reduce the potential for exposure to odors; considering actions taken by the public to reduce exposure to odors from prescribed burns are voluntary, there are no additional feasible methods to compel the public to reduce its exposure. Although all feasible precautions and notifications have been included in standard project requirements, the potential remains that short-term exposure to odorous smoke emissions from unpredictable weather changes could occur. Therefore, this impact is potentially significant and unavoidable.

#### Archaeological, historical, & tribal cultural resources

(Final PEIR, Vol. II, Chapter 3, § 3.5.3.)

##### 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.

Implementation of Mitigation Measure CUL-2 will reduce impacts to unknown archaeological or subsurface historical resources because it would protect in place, recover information, record, or otherwise treat the discovered resource appropriately. However, given the large geographic extent of the treatable landscape, the wide variety in resource types and significance, the potential extent of damage during inadvertent excavation, it is uncertain whether this measure will avoid a substantial adverse change in the significance of a unique archaeological or subsurface historical resource. Although SPRs will require every reasonable effort to identify and protect resources, there could be some rare instances where inadvertent damage of unknown resources may be extensive, and a substantial adverse change may not be fully mitigated. Although these are anticipated to be unusual exceptions, in these cases, impacts to undiscovered unique archaeological or subsurface historical resources would be significant and unavoidable.

#### biological resources

(Final PEIR, Vol. II, Chapter 3, § 3.6.3.)

##### BIO-2: Substantially Affect Special-Status Bumble Bees Either Directly or Through Habitat Modification

There is little known about the life history characteristics and behaviors of special-status bumble bees. Additionally, their presence is difficult to detect. While there is much to be learned about the special-status bumble bee colonies, they are generally believed to overwinter near the ground surface in loose soil or under leaf litter or other debris. Nests for special-status bumble bees typically occur in abandoned rodent burrows or other animal nests, but may also occur in above-ground cavities. There is no established methodology for detecting overwintering or nesting colonies of these species. The sizes of the colonies for these species are not well documented; however, western bumble bee colonies can contain over 1,600 workers and produce up to 360 new queens (Xerces Society et al. 2018).

There is evidence of widespread population declines, which led in part to the recent determination by CDFW to designate four bumble bees as Candidate species for listing under CESA. Primary threats to the survival of special-status bumble bees include habitat loss or modification due to development, agriculture, high-intensity fire, fire suppression, and herbicide use (Xerces Society et al. 2018). As described above, herbicide use under the CalVTP may exacerbate threats to special-status bumble bees. Pursuant to its objectives, implementation of the CalVTP is intended to reduce the occurrence of high-intensity wildfire and modify past practices of fire suppression, which could beneficially decrease an existing threat to special-status bumble bees. Although Mitigation Measure BIO-2g would reduce impacts to foraging special-status bumble bees and their floral resources, substantial adverse effects could still occur to special-status bumble bee species during nesting and overwintering, because vegetation treatment activities, such as prescribed burning, soil disturbance, or use of heavy equipment, could kill individuals or crush or disturb overwintering or nesting colonies. Because little is known about the potential nesting and overwintering behavior and habitat for these species, many habitat types within the species range may be suitable with the presence of nesting or overwintering substrate (e.g., loose soil or under leaf litter or other debris). Additionally, there is no established methodology for detecting overwintering or nesting colonies of these species. Because these species have not yet been well studied and colonies are likely difficult to detect, there is little evidence to guide effective impact avoidance or minimization strategies to protect nesting or overwintering colonies. Mitigation Measure BIO-2g presents feasible impact avoidance and minimization measures that are based on emerging, early understanding of species protection; as their candidacy for listing is reviewed by CDFW, additional guidance may emerge and could be implemented by project proponents to reduce impacts. Project proponents can and should stay abreast of new information, as research and scientific understanding evolve. However, with the current state of the science and species knowledge, if underground colonies cannot be detected, they cannot be avoided and, in this case, the extent and severity of impacts to special-status bumble bees from vegetation treatment cannot be predicted with meaningful certainty. Therefore, given the rarity of these candidate species, if colonies were to be destroyed, it is possible that populations of these species would be reduced below self-sustaining levels, and treatment activities could substantially reduce the number or restrict the range of species. Over time, as avoidance strategies are developed with research and improved scientific understanding, adequate protection of the species may become feasible. However, at this time, recognizing the difficulty in detecting overwintering and nesting bumble bees and determining the occurrence and severity of impacts, for purposes of good faith, full disclosure under CEQA, this impact is designated as potentially significant and unavoidable

#### greenhouse gas emissions

(Final PEIR, Vol. II, Chapter 3, § 3.8.3.)

##### 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. However, there is uncertainty in predicting future wildfire occurrence, emissions, and carbon sequestration rates, which are highly variable depending on many factors. Future wildfire intensities and carbon sequestration in treated areas are the subjects of continued scientific research and debate. To 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.

Implementation of Mitigation Measure GHG-2 requires project proponents conducting prescribed burns to implement GHG emission reduction techniques, as feasible. Given the potential infeasibility of implementing specific emission reduction techniques and the uncertainties associated with all the parameters and objectives of prescribed burning, it is not feasible to precisely quantify the GHG reductions that will be achieved by implementation of Mitigation Measure GHG-2 in this programmatic evaluation. For instance, these measures may not always be feasible when the objective of a prescribed burn is to consume coarse woody debris in areas of high tree mortality. Also, the feasibility of conducting mosaic can depend on the size of a burn and mosaic burning may not meet the objectives of CAL FIRE or the landowner. Moreover, burning fuels with a higher fuel moisture content can generate more smoke and result in less consumption, potentially reducing the longevity or effectiveness of a prescribed burn treatment. Thus, acknowledging the need for a balance between achieving treatment rate objectives and minimizing immediate GHG or smoke impacts, the levels of GHGs emitted by prescribed burns could still be considerable. Implementation of Mitigation Measure GHG-2 will support the development and implementation of refined treatment strategies in compliance with the *California 2030 Natural and Working Lands Climate Change Implementation Plan* to heighten the GHG benefit of this plan. With the continued evolution of the body of scientific knowledge about the long-term carbon sequestration effects of vegetation treatments and application of research-backed guidance to treatment implementation, the likelihood of net GHG benefits is reasonably expected to grow over time. Other measures could include the purchase and retirement of carbon credits to offset the one-time GHG emissions directly associated with treatment activity; however, this approach would consume financial resources needed to achieve the wildfire risk reduction objectives of the CalVTP, so offset purchase could detract from and would not contribute to feasibly meeting the key objective of increasing the pace and scale of treated acreage.

Similar to the reasons for the pre-mitigation significance determination, to meet CEQA’s mandate of good faith disclosure and acknowledge potential future impacts in light of uncertainties, the GHG impact is classified as potentially significant and unavoidableafter implementation of mitigation. Even though the long-term outcome may yet become beneficial, the “potentially significant and unavoidable” determination alerts the public to the potential that net positive emissions may persist over time.

#### Transportation

(Final PEIR, Vol. II, Chapter 3, § 3.15.3.)

##### TRAN-3: Result in a Net Increase in VMT for the CalVTP

Under the CalVTP, the scale of treatment activities will 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 will also increase because many more individual treatment projects will be implemented. A key goal of the CalVTP is to decrease the occurrence and severity of wildfires. Reduced occurrence and severity of wildfires will result in a reduction in response activity and trips, which is reasonably expected to decrease in VMT over the long term, compared to conditions without the CalVTP. However, it is not feasible to predict 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, the 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.

Even though the intended outcome is likely less than significant, the PEIR concluded the impact is potentially significant and unavoidable in order to disclose in good faith the potential effects related to VMT generated by the program as a whole.

#### public services, utilities, and service systems

(Final PEIR, Vol. II, Chapter 3, § 3.16.3.)

##### 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 will 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 processing will 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 will 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, the PEIR classifies this impact as potentially significant, notwithstanding the possibility that capacity could increase with the scale of treatments such that it will not be exceeded for most or all individual treatments.

An increase in the capacity of local infrastructure to process woody biomass and other organic materials could occur over the next several years. Increased capacity for the processing of woody biomass could be added though a market response to increased supplies of feedstock material and demand for products that can be produced from these materials. The deployment of advanced processing and manufacturing techniques in recent years, such as Aerated Static Piles for composting, gasification for biomass energy conversion, and panelized building materials derived from mass timber are creating new pathways for the disposition of biomass wastes that previously did not exist. On-site chipping and blowing, pile burning or transport to direct-combustion biomass facilities are no longer the only viable options for managing the waste generated from dead and dying vegetation removed for purposes of fire fuels reduction. Technological advancements, state policies and demand for renewable fuel sources are driving a nascent market transformation for biomass that provides additional options for disposition.

A variety of programs have been implemented by state agencies to encourage alternative biomass applications. Since 2014, CalRecycle has invested $63.3 million in grants supporting the development of 14 expanded composting facilities throughout the state, some of which are capable of processing biomass. The California Energy Commission has funded research on gasification technologies for biomass, and two demonstration projects to explore the feasibility and scalability of converting forest-based fuels into renewable gas. The California Natural Resources Agency has also formed a Wood Products Working Group which has provided recommendations on expanding markets for products created from woody biomass derived from vegetation treatment activities. Through these efforts California’s solid waste infrastructure may expand and evolve into a system with long-term capacity to manage the woody biomass generated from the activities proposed under CalVTP and other organic wastes generated from statewide landfill waste diversion.

Adequate capacity to process solid organic waste must be developed through a coordinated public agency and private industry response. The success of the private sector in responding to the increase in solid organic waste cannot be predicted due to many external factors that influence investment. Furthermore, there is a geographic consideration inherent to this conclusion that recognizes that market responses do not occur uniformly across the state. This impact assessment uses the threshold of significance from State CEQA Guidelines Appendix G, which indicates that exceeding the capacity of *local* solid waste infrastructure is the primary consideration. While some localities within the state may currently have the requisite infrastructure to process woody biomass or may develop this capacity in the near future in response to the previously mentioned state policies and programs, it cannot be guaranteed, that all localities across the state would develop the capacities to process excess solid organic waste produced from treatment activities within the timeframes of the proposed activities. For this reason, because mitigation is not available, and to not risk understating potential future impacts in light of uncertainties about market response, the PEIR classifies this impact as potentially significant and unavoidable, 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. Even though the predicted outcome would be less than significant, the “potentially significant and unavoidable” determination is intended to meet CEQA’s mandate of good faith disclosure of all potential effects related solid waste capacity exceedance, in consideration of the program as a whole.

### Scope of Necessary Findings and Considerations for Project Alternatives

As noted above, these Findings address whether the various alternatives substantially lessen or avoid any of the significant impacts associated with the CalVTP and then consider the feasibility of each alternative. Under CEQA, as noted earlier, “[f]easible means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” (CEQA Guidelines, § 15364.) The concept of feasibility permits agency decisionmakers to consider the extent to which an alternative is able to meet some or all of a project’s objectives. In addition, the definition of feasibility encompasses “desirability” to the extent that an agency’s determination of infeasibility represents a reasonable balancing of competing economic, environmental, social and technological factors supported by substantial evidence.

These Findings consider the extent to which the alternatives are able to meet the Program objectives, as described in the PEIR and in Section 3.2, above.

## Alternatives considered but dismissed from further evaluation

### Non-Vegetation Management Alternatives

Several comments on the NOP and on prior versions of the CalVTP PEIR suggested that the PEIR should consider an approach that reduces wildfire risks to life, property, and natural resources through methods that do not involve vegetation management. These comments recommended a variety of non-vegetation management techniques for reducing wildfire risk, including retrofitting existing structures to reduce their potential for ignition during a wildfire; revising building codes to require that new structures be less prone to ignition; implementing various land use controls that would limit new development in fire-prone areas; enhancing emergency evacuation planning; implementing measures to prevent human ignition such as public education or restrictions on high-risk activities; and expanding fire suppression activities.

As described in Chapter 1 of the PEIR, state, federal, and local agencies implement a wide range of programs to reduce wildfire risks to life, property, and natural resources. These programs include various vegetation management activities, as well as non-vegetation management approaches similar to the techniques suggested in comments. The non-vegetation management approaches suggested in comments are consistent with other state, federal, and local programs, but they are not analyzed as alternatives in the PEIR because these approaches would not meet any of the objectives of the CalVTP, which are inherently focused on managing vegetation as an integral component of statewide wildfire risk reduction efforts.

Objective 1 of the CalVTP is to 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 wildland fire fuels consistent with California’s 2018 Strategic Fire Plan. These non-vegetation management alternatives would not meet this objective because, by definition, they are not vegetation management and would not serve to manage the amount and continuity of wildland fuels as recommended in California’s 2018 Strategic Fire Plan. The non-vegetation management alternatives would also not meet the Objectives 2 or 3 of the CalVTP, which include substantially increasing the pace and scale of vegetation treatments and increasing the use of prescribed burning consistent with applicable executive orders and legislation because they do not involve vegetation treatment, including prescribed burns. Because Senate Bill 1260, Statutes of 2018 (SB 1260) directs that the PEIR serve as the programmatic CEQA coverage for prescribed burns within the SRA, precluding prescribed burning under these alternatives would also be inconsistent with statute. The non-vegetation management alternatives would also meet the objectives 4 and 5 of the CalVTP, which require vegetation treatments to manage natural and working lands as net carbon sinks and to improve ecosystem health in fire-adapted habitats, because they do not involve vegetation management.

Many of the non-vegetation management approaches recommended in comments are currently enacted under existing programs as described in Section 1.4 of Chapter 1, other than the CalVTP, that are intended to reduce the risk or effects of wildfire. The Board recognizes the need to implement a comprehensive strategy to reduce wildfire risk in California that integrates non-vegetation management with vegetation management approaches within the state, encompassing urban, rural, and wildland areas at the federal, state, and local levels, and by potentially affected members of the public (which is every Californian). Therefore, these alternatives must occur in combination with the CalVTP, rather than as alternatives to or a part of the CalVTP. For the purposes of CEQA, non-vegetation management alternatives are not evaluated in detail in the PEIR because these alternatives would not meet any of the objectives of the CalVTP.

### Defensible Space Focus

Comments on the NOP and on prior versions of the VTP PEIR suggested that the CalVTP should focus solely on implementing and enforcing defensible space within 100 feet of homes and other structures. An alternative that focuses solely on defensible space within 100 feet of structures is not evaluated in detail because maintenance of defensible space within 100 feet of structures is already required by PRC Section 4291, and because it would not meet any of the program objectives.

PRC Section 4291 requires that owners of a structure “in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material” manage vegetative fuels “so that a wildfire burning under average weather conditions would be unlikely to ignite the structure.” This requirement is enforced through several mechanisms including as a condition of a building permit, by insurance companies as a condition of an insurance policy, and by the code enforcement programs of local jurisdictions and fire districts.

An alternative that limits vegetation management to within 100 feet of structures would not meet any of the program objectives. A sole focus on defensible space would not meet Objective 1, because it would not reflect the range of vegetation management actions called for in California’s 2018 Strategic Fire Plan. While defensible space is consistent with this plan, the plan also calls for restoring the ecological role of prescribed fire, forest and rangeland fuel reduction, and fuel reduction efforts at the watershed or fireshed level. By limiting vegetation management to within 100 feet of structures, it would not be possible to achieve the substantial increase in the pace and scale of vegetation management identified in Objective 2 (and directed by Executive Order), or to increase the use of prescribed burning consistent with Objective 3 (and directed by SB 1260). A defensible space focused alternative would also not meet the Objectives 4 and 5 of the CalVTP, which identify vegetation treatments to manage natural and working lands as net carbon sinks and to improve ecosystem health in fire-adapted habitats, because these objectives involve management actions throughout natural and working lands.

Focusing treatment to implement and enforce defensible space while forgoing or substantially reducing vegetation treatments outside of defensible space would not achieve the same level of wildfire risk reduction to life and property or avoid the indirect effects (i.e., smoke exposure) in the communities that defensible space is intended to protect as a more comprehensive that also aims to reduce wildfire risk in wildlands through vegetation management. Vegetation treatments implemented under the CalVTP may not avoid catastrophic wind-driven fires such as those experienced in California in 2018. However, vegetation treatments that have been implemented in wildlands and in the WUI (outside of defensible space) have a valuable role in containing these extreme fires, when weather conditions shift, wind subsides, and fire intensity decreases. In addition, and importantly, most fires that occur within the state, including those that threaten communities, are not highly wind driven and can ignite outside of defensible space; treatments under the CalVTP are intended to help slow and suppress them.

The Board recognizes the need to implement a comprehensive strategy to reduce wildfire risk in California that integrates various approaches within the state, encompassing urban, rural, and wildland areas. Defensible space must be maintained pursuant to PRC Section 4291, the CalVTP would treat vegetation in the WUI and wildlands in furtherance of a “community-out” approach to wildfire risk reduction. These alternatives focused on implementing and enforcing defensible space must occur in combination with the CalVTP, rather than as alternatives to or a part of the CalVTP and are not evaluated in detail in the PEIR.

### Electric Utility Focus

Comments on the NOP suggested that the CalVTP should focus on vegetation management around powerlines. This alternative is not evaluated in detail because vegetation management around powerlines is already required by state and federal law and because it would not achieve most of the program objectives. PRC Sections 4292 and 4293 establish minimum required fuel breaks surrounding utility poles and power lines. Both requirements are already enforced by CAL FIRE in State Responsibility Areas during the fire season. California Public Utilities Commission (CPUC) General Order 95 establishes additional year-round clearance requirements below powerlines. CPUC Resolution ESRB-4 directs utilities to take additional measures to reduce the risk of fire, including increasing vegetation inspections; removing hazardous, dead and diseased trees and other vegetation near electric power lines and poles; sharing resources with CAL FIRE to staff lookouts adjacent to the utilities’ property; and clearing access roads under power lines for fire truck access. At the federal level, the North American Electric Reliability Corporation enforces Standard FAC 003-4, which mandates vegetation clearance near high-voltage transmission lines. Actions to reduce wildfire risk specific to electric utilities must be implemented as part of the comprehensive strategy to reduce wildfire risk throughout California in combination with the CalVTP, rather than as alternatives to or as part of the CalVTP,and are not evaluated in detail in the PEIR.

### Alternatives Evaluated in the 2017 Draft VTP PEIR

In 2017, the Board released a Draft PEIR for the VTP. The 2017 Draft VTP PEIR evaluated a proposed program, a No Program Alternative, and four action alternatives. The alternatives in the 2017 Draft VTP PEIR were developed to meet objectives that were developed before 2017. Since the 2017 Draft VTP DEIR was released, California has experienced the two largest recorded wildfires in its history (Mendocino Complex and Thomas Fire), and the most destructive wildfire in its history (Camp Fire). Substantial progress has been made in responding to California’s wildfire crisis since 2017. Since the 2017 Draft VTP PEIR was released, California’s 2018 Strategic Fire Plan was prepared, Executive Order B-52-18 was issued, Senate Bill 1260 Statutes of 2018 was enacted, and California’s 2030 Natural and working Lands Climate Change Implementation Plan was adopted. These recent plans, executive order, and legislation provide the foundation for the CalVTP’s objectives. Because the 2017 alternatives were prepared before these recent plans, executive order, and legislation, those alternatives do not meet the objectives of the CalVTP, and do not adequately respond to the current wildfire crisis and directives of the Governor’s administration.

However, elements of the alternatives evaluated in the 2017 Draft VTP PEIR are incorporated into the alternatives evaluated in the PEIR, as relevant. In particular, the proposed program evaluated in the 2017 Draft VTP PEIR forms the basis of Alternative A: Reduced Scale of Treatments in the PEIR. Alternative A: WUI Only, from the 2017 Draft VTP PEIR shares similarities with Alternative B: WUI Fuel Reduction Only in the PEIR. Alternative B: WUI and Fuel Breaks from the 2017 Draft VTP PEIR is similar to Alternative C: Modified WUI Fuel Reduction and Fuel Breaks in the PEIR; and Alternative D: Reduction of Prescribed Fire Treatments to Reduce Air Quality Impacts, in the 2017 Draft VTP PEIR included a similar strategy as Alternative D: No Prescribed Burning Treatments in the PEIR. The 2017 Draft VTP PEIR also evaluated Alternative C, which would focus vegetation management on only those areas classified as Very High Fire Hazard Severity Zones (VHFHSZ). As the 2017 Draft VTP PEIR noted, a significant inadequacy of this alternative would be the inability to protect communities at risk that are located outside of areas mapped as VHFHSZ. This alternative is also unlikely to reduce any potentially significant impacts of the CalVTP, and was therefore, not evaluated in detail in the PEIR.

In summary, the alternatives evaluated in the 2017 Draft VTP PEIR would not meet the new objectives of the CalVTP or reduce any potentially significant impacts of the CalVTP; therefore, the alternatives evaluated in the 2017 Draft VTP PEIR are not evaluated in detail in the PEIR. However, relevant components of the alternatives evaluated in the 2017 Draft VTP PEIR have been integrated into the alternatives evaluated in the PEIR.

### Alternatives Dismissed in the 2017 Draft VTP PEIR

The 2017 Draft VTP PEIR considered but eliminated the following seven alternatives from detailed review:

* 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.

Elements of the High Acres in WUI Only Alternative were incorporated into Alternative B in the PEIR. The remaining alternatives are not evaluated in detail in the PEIR for the same reasons they were not evaluated in detail in the 2017 Draft VTP PEIR. The 2017 Draft VTP PEIR explained why these alternatives were not evaluated in detail on pages 3-36 through 3-40. That discussion is incorporated by reference herein.

## alternatives analyzed in the Peir

The PEIR identified and compared environmental effects of the six alternatives listed below with the environmental impacts resulting from the CalVTP.

### No Program Alternative

(Final PEIR, Vol. II, Chapter 6, § 6.2.1.)

CEQA Guidelines section 15126.6, subdivision (e), requires every EIR to include a No Project Alternative. “The purpose of describing and analyzing a no project alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.” In general, this alternative should discuss “existing conditions … as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” Consistent with this obligation, “where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project’s non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.” (*Id*. at subd. (e)(3)(B).)

Under the No Program Alternative, CAL FIRE would continue to implement vegetation treatments through existing programs, authorities, and funding and would continue to rely on the existing range of CEQA compliance tools. Determining what vegetation treatments would be reasonably expected without approval of the CalVTP would consider efforts by the Board and CAL FIRE to implement existing plans, policies, and operations. It would also need to recognize constraints on the pace and scale of treatments associated with the necessity to use project-by-project environmental review and permitting, because of the absence of programmatic approval of the full spectrum of management tools (i.e., no use of herbicides, expansion of prescribed burning, nor program targeting the goal of 250,000 acres of treatment, and limited existing environmental clearance in forest vegetation). Because executive orders, an emergency declaration, and several programs are in place to address the state’s wildfire crisis, it is reasonable to expect that efforts would continue to increase the amount of vegetation treatment carried out in the future. However, it is also reasonable to expect that any increase in the amount of vegetation treatment would be limited without the streamlining provisions of the CalVTP; estimating a precise acreage treated under the No Program Alternative would be speculative.

CEQA compliance strategies would be varied for the No Program Alternative, consisting of a range of existing, standard environmental review options. Small treatments could qualify for Categorical Exemptions, where applicable. Some vegetation treatments located in shrub and grass fuel types could continue to rely on the 1981 Chaparral Management Program EIR for environmental compliance, but vegetation treatments in forested (tree) fuel types could not. Vegetation management projects in forest fuel types or otherwise outside the scope of the Chaparral Management Program EIR could fall within the scope of activities considered in the California Forest Improvement Program EIR. Most substantial vegetation treatments, including mechanical mastication or herbicide application, would typically require the preparation of project-specific CEQA documents, such as EIRs or Negative Declarations/Mitigated Negative Declarations.

A project-by-project approach to environmental review of vegetation treatment projects has proven time consuming and costly. CAL FIRE and other project proponents would need to dedicate a greater proportion of available funding and staff resources to project-specific environmental review than under the CalVTP, which would streamline project-level environmental review of vegetation treatment. As a result, it would not be feasible to substantially increase the pace and scale of vegetation treatments. Because California has committed to implementing measures to reduce the risk of wildfire, such as in response to Executive Orders B-52-18, and N-05-19, the rate of vegetation treatments would likely increase to some degree beyond what has occurred under CAL FIRE’s existing programs, but to estimate an acreage target would be speculative. Vegetation treatment through CAL FIRE’s existing Vegetation Management Program (VMP) has been limited, averaging approximately 7,000 acres treated annually over the past 14 years (see Table 4-1 in Chapter 4, “Cumulative Effects Analysis”). This is partly because the VMP does not include the use of herbicides or mechanical treatments on forested lands. Most recently, CAL FIRE treated approximately 33,000 acres in 2017/2018 using the same methods proposed under the CalVTP. (See Final PEIR, Vol. II, Chapter 2, Table 2-1.)

#### Potential impacts of the no program alternative in comparison to the CalVTP

Treatment activities implemented under the No Program Alternative would not integrate the SPRs required under the CalVTP into treatment design and avoid and minimize impacts. Because treatments under this alternative would be subject to project-by-project CEQA review or would be implemented under existing programmatic CEQA documents, it is assumed some environmental protections would be in place as environmentally protective measures proposed by project proponents and/or mitigation measures identified through project-level CEQA review. Because treatment activities under the No Program Alternative would be similar to the CalVTP, it is possible that environmental impacts could be mitigated to a similar degree as under the CalVTP. However, is not known whether the environmental protection measures applied to treatments under this alternative would reduce impacts to the same degree of effectiveness as the CalVTP. The SPRs that would be implemented under the CALVTP 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 where applicable to achieve environmental protection. In addition, the CalVTP SPRs were developed in consideration of cumulative effects at a statewide scale for most resources. In contrast, environmental protection measures developed for individual projects may not have these environmentally protective benefits. It is therefore, reasonable to assume that the SPRs required under and specifically developed for the CalVTP would be more effective at consistently avoiding and minimizing impacts statewide than those developed for individual projects.

Because the No Program Alternative would not include the streamlining benefits of the CalVTP, it is anticipated that less vegetation management would occur under this alternative than the CalVTP. Less vegetation management could generally result in reduced environmental effects statewide from treatment operations compared to the CalVTP, but the lack of consistent SPRs specifically developed to avoid and minimize statewide impacts of treatments could also contribute to greater impacts than the CalVTP. Thus, where there are no other differences between the No Program Alternative and the CalVTP, the environmental effects of the No Program Alternative are expected to be similar to the CalVTP. In addition, the adverse environmental effects of wildfire would be more likely to manifest under the No Program Alternative because fewer acres would be treated for wildfire prevention. For example, the East Camino Cielo fuel break near Montecito provided critical access to firefighters during the Gibraltar Fire in 2015, helping to keep that fire contained to 21 acres in a place that has seen frequent destructive fires (Jesuita, Tea, Paint, Romero, and Coyote). (<https://www.fire.ca.gov/media/5585/fuel_break_case_studies_03212019.pdf>.) The Gibraltar Fire was burning in extreme weather conditions, and without the availability of this access point, it is likely the fire would have burned more acres with deleterious environmental impacts. Under the No Project Alternative, there are fewer opportunities to create and maintain fuel breaks such as that at East Camino Cielo. The No Program Alternative, therefore, will not substantially lessen any significant impacts associated with the CalVTP.

##### Aesthetics & Visual Resources

Under the No Program Alternative, the same treatment activities as the CalVTP would occur, although CEQA review would be conducted on a project-by-project basis. These treatments could affect aesthetics and visual resources across the entire treatable landscape. The extent of effects on aesthetics and visual resources would be less than the CalVTP because fewer acres would be treated each year, owing to the need for project-by-project planning and environmental review. As with the CalVTP, the visual effects of implementing treatments would be short-term and temporary. Like the CalVTP, the long-term effects of most treatment types would be visible, but would not result in 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. The exception is for non-shaded fuel break treatments. Under the No Program Alternative, non-shaded fuel break treatments could result in a substantial long-term adverse change in the landscape by creating a contrasting linear element in an otherwise natural environment. As with the CalVTP, mitigation measures could be implemented, but it would not be possible to reduce the visual effects of non-shaded fuel break to a less-than-significant level. This would result in the same significant and unavoidable impact as the CalVTP. (*Same significant and unavoidable impact*)

##### Air Quality

The No Program Alternative would result in the same significant and unavoidable air quality impacts as the CalVTP related to treatment emissions that could conflict with CARB’s *Mobile Source Strategy* or exceed CAAQS or NAAQS, and smoke from prescribed burns that could result in toxic air contaminants and objectionable odors. As with the CalVTP, treatment activities would comply with all existing applicable regulations for the protection of air quality. Like the CalVTP, the No Program Alternative would result in a significant and unavoidable impact because the level of mobile-source emissions would conflict with the California Air Resource Board’s Mobile Source Strategy. The No Program Alternative would also result in a significant and unavoidable impact because it could generate emissions of criteria air pollutants and precursors during treatment activities that would exceed CAAQS or NAAQS depending on the frequency, location and duration of treatments. As with the CalVTP, the No Program Alternative would also result in a significant and unavoidable impact because prescribed burns could result in objectionable odors and the short-term exposure of people to concentrations of TACs associated with an acute health risk. Other impacts related to diesel particulate matter, fugitive dust containing naturally occurring asbestos, and objectionable odors from diesel exhaust would be similar to the CalVTP. In summary, the air quality effects of the No Program Alternative would be similar to the CalVTP. The same significant and unavoidable impacts would remain. (*Same significant and unavoidable impacts*)

##### Archaeological, Historical, & Tribal Cultural Resources

The effects of the No Program Alternative on archeological, historic, and Tribal Cultural Resources (TCRs) would be similar to the CalVTP. As with the CalVTP, compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 would avoid disturbance of human remains. Unknown TCRs, unique archaeological resources or subsurface historical resources could be inadvertently damaged during treatment activities. This would result in the same significant and unavoidable impact as the CalVTP. Overall, the impacts would be similar to the CalVTP. (*Same significant and unavoidable impact*)

Biological Resources

The No Program Alternative would result in similar effects on biological resources as the proposed program including the same significant and unavoidable impact to special-status bumblebees. As with the proposed program, treatment activities under this alternative could inadvertently damage or destroy special-status plants, fish, wildlife, and their habitat. Treatment activities under the No Program Alternative would not implement the mitigation measures identified for the proposed program. However, it is assumed that project-level environmental reviews would adequately identify and mitigate these effects. Treatments implemented under the No Program Alternative would encounter the same difficulty as the Proposed Program with effectively mitigating impacts to overwintering and nesting special-status bumblebees and this impact would be significant and unavoidable. Adverse long-term effects from treatments under this alternative would be similar to the proposed program; however, any long-term benefits related to ecological restoration would not be realized to the same extent (e.g., at the landscape level) as the proposed program because fewer acres would be treated. Treatment activities could 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 ecological function of sensitive natural communities and habitats. It is assumed that project-level environmental review would identify and appropriately mitigate these impacts where they could occur. The No Program Alternative would also result in the same effects related to state or federally protected wetlands, movement corridors, nurseries, and common nesting birds; and it is assumed that project-level environmental review would identify and mitigate these impacts where they could occur. Like the proposed program, the No Program Alternative would have no impact related to conflicts with local policies, ordinances, and plans because each project would be evaluated for consistency during project-level CEQA review. Overall, the No Program Alternative would include the same impact mechanisms and the same effects as the proposed program because treatment activities are the same. (*Same significant and unavoidable impact*)

##### Greenhouse Gas Emissions

The No Program Alternative would result in the same significant and unavoidable impact as the CalVTP related to GHG emissions from treatment activities. It would include the same GHG emission-generating activities as the proposed alternative. Under the No Program Alternative, treatment activities would reduce wildfire risk, which would reduce GHG emissions and increase carbon sequestration over the long-term. This would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. However, because the No Program Alternative would likely include less vegetation management than the CalVTP, it would not reduce wildfire risk to the same extent as the CalVTP and therefore could result in less potential long-term GHG emission reduction and carbon sequestration benefits. Even though GHG emissions may be less under the No Program Alternative, the GHG impact would be slightly greater than the CalVTP because it would result in less long-term GHG emission reduction and carbon sequestration than the CalVTP. (*Same significant and unavoidable impact*)

##### Transportation

The transportation effects of the No Program Alternative would be similar to the CalVTP. Like the CalVTP, traffic operations during vegetation treatments would be temporary and localized. Potential temporary traffic effects resulting from individual vegetation treatment projects would be partially reduced through compliance with existing laws and regulations. Most residual traffic impacts could be avoided or minimized by minimizing potential hazards because of smoke generated during prescribe burns, requiring that a TMP be prepared, or other mitigation measures identified through project-level CEQA review. However, the increase in treated acres above existing conditions under this alternative may result in a net increase in vehicle miles traveled (VMT) to implement treatments. (*Same significant and unavoidable impact)*

##### Public Services, Utilities, and Service Systems

The No Program Alternative would have the same significant and unavoidable impact as the CalVTP related to generating solid organic waste that could exceed local infrastructure capacity, and would generally have similar or slightly less severe effects on public services, utilities, and service systems. Like the CalVTP, the No Program Alternative would result in an increase in the volume of solid organic waste transported offsite to existing biomass power plants, wood product processing facilities, and/or composting facilities for processing. Because the timing, treatment location, and destination for biomass from future projects cannot be known, it is not possible to verify that this increase in solid organic waste would not exceed the capacity of local solid waste infrastructure in some locations. As with the CalVTP, the No Program Alternative would comply with federal, State, and local management and reduction goals, statutes, and regulations related to solid waste; and would not discernably affect the availability of water supply. (*Same significant and unavoidable impact)*

#### feasibility of the no program alternative

The No Program Alternative would achieve two of the five objectives of the CalVTP to some degree. It would not achieve the rest of the Program’s objectives.

Objective 1: The No Program Alternative would not substantially increase management of the amount and continuity of wildland fire fuel and would, therefore, achieve Objective 1 to a lesser degree than the CalVTP. The No Program Alternative would allow for continued actions that manage the amount and continuity of wildland fire fuels through WUI, fuel break, and ecological restoration treatment activities. This would help to implement Goal 5 of California’s 2018 Strategic Fire Plan, which, in part, calls for promoting forest and rangeland resilience through fuels reduction, restoring the ecological role of fire through prescribed burning, and increasing the pace and scale of fuels treatment activities.

Objective 2: The No Program Alternative would not achieve the pace and scale identified in Objective 2, and therefore would not achieve Objective 2.

Objective 3: The No Program Alternative would not achieve Objective 3 because it would not increase the use of prescribed burning as a vegetation treatment activity. It would not provide a programmatic environmental review document for prescribed fires as directed by Public Resources Code section 4483(a), and therefore would not be consistent with the intent of Senate Bill 1260 of 2018.

Objective 4: The No Program Alternative would not achieve Objective 4 because it would not support a substantial increase in the pace and scale of forest management for fire fuel and carbon management purposes. Without a substantial increase in the amount of treatments under the No Program Alternative, it would not meaningfully contribute to the management of natural and working lands as a net carbon sink.

Objective 5: The No Program Alternative would result in less ecological restoration than the CalVTP, so it would not fully achieve Objective 5.

The No Program Alternative would reflect a continuation of current practices. The No Program Alternative meets some of the Program objectives to some degree, but it does not meet most of the Program’s Objectives. For all of these reasons or any of them individually, the Board rejects the No Program Alternative as infeasible.

### Alternative A: Reduced Scale of Treatments

(See Final PEIR, Vol. II, Chapter 6, § 6.2.2.)

Alternative A is intended to substantially lessen potentially significant environmental impacts that could result from treatment types by reducing the annual target acreage of treatments. It would treat up to 60,000 acres per year with a combination of WUI fuel reduction, fuel break, and ecological restoration treatments. This annual target acreage is used to define the Reduced Scale of Treatments Alternative, because at less than 25 percent of the treatment target in the CalVTP, it reflects a substantial decrease in the scale of treatments and associated impacts. This treatment target was used by CAL FIRE in the 2017 VTP Draft PEIR.

This alternative would include the same treatment types as the CalVTP. (See Final PEIR, Vol. II, Chapter 2, § 2.5.1.) It would also include the same treatment activities and relative distribution of activities as the CalVTP. This would include a combination of prescribed burning (50 percent of treatment area), mechanical treatments (20 percent), manual treatment (10 percent), prescribed herbivory (10 percent), and herbicide application (10 percent). (See Final PEIR, Vol. II, Chapter 2, §§ 2.5.2, 2.5.3.) As with the CalVTP, the treatment activity or combination of activities for a specific treatment site would be selected based on the site-specific characteristics and objectives of the treatment.

Treatment activities would occur within the approximately 20.3 million-acre treatable landscape. (See Final PEIR, Vol. II, Chapter 2, Figure 2-1.) As with the CalVTP, treatment activities would occur in all fuel types (i.e., tree, shrub, and grass). However, under Alternative A, treatments would be limited to 60,000 acres per year, which is 24 percent of the area that would be treated under the CalVTP. Because it is anticipated that it will take the CalVTP several years to “ramp up” from current treatment levels, the extent of treatments under Alternative A would be similar to the CalVTP in the initial years of implementation. Ultimately, the extent of treatments under Alternative A would be more limited than the CalVTP in later years, as treatments under the CalVTP exceed 60,000 acres per year.

#### Potential impacts of alternative A

Alternative A would reduce more environmental impacts of the CalVTP than any other alternative because it would treat the least amount of vegetation of any alternative. Even with the reductions, Alternative A would still result in some impacts related to aesthetics; air quality; archaeological, historical, and tribal cultural resources; biological resources; geology, soils, paleontology, and mineral resources; hazardous materials, public health and safety; noise; recreation; transportation; and public services, utilities, and service systems. Because Alternative A would include substantially less vegetation treatment, it would result in a greater wildfire risk, less carbon sequestration, and more GHG emissions during potential future wildfires.

##### Aesthetics & Visual Resources

Under Alternative A, the same treatment activities as the CalVTP could affect aesthetics and visual resources across the entire treatable landscape. However, the extent of effects on aesthetics and visual resources would be less than the CalVTP because Alternative A would treat approximately one fourth of the area treated by the CalVTP each year. As with the CalVTP, the visual effects of implementing treatments would be short-term, temporary, and implementing SPR AES-2 as part of the treatment activities under the program would minimize visual impacts from the presence of treatment equipment. Like the CalVTP, the long-term effects of most treatments would be visible, but 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. Alternative A would include non-shaded fuel break treatments, which could result in a long-term substantial adverse change in the landscape by resulting in a contrasting linear element in an otherwise natural environment. This would result in the same significant and unavoidable impact as the CalVTP, however the impact would occur in fewer locations than under the CalVTP. (*Same significant and unavoidable impact*)

##### Air Quality

Alternative A would result in the same significant and unavoidable air quality impacts as the CalVTP related to exceedance of CAAQS or NAAQS, although the quantity of air pollutant emissions would be less than under the CalVTP. Alternative A would result in a significant and unavoidable impact because it would generate emissions of criteria air pollutants and precursors during treatment activities that would exceed CAAQS or NAAQS. As with the CalVTP, Alternative A would also result in a significant and unavoidable impact because prescribed burns could result in objectionable odors and the short-term exposure of people to concentrations of TACs associated with an acute health risk. Other impacts related to diesel particulate matter, fugitive dust containing naturally occurring asbestos, and objectionable odors from diesel exhaust would be similar to, but less than, the CalVTP because treatment activities would be similar to the CalVTP but reduced in scale. Overall, the air quality effects of the Alternative A would be similar to, but less than, the CalVTP and the same significant and unavoidable impacts would remain. (*Same significant and unavoidable impacts*)

##### Archaeological, Historical, & Tribal Cultural Resources

The effects of Alternative A on archeological, historic, and TCRs would be similar to but less than the CalVTP because fewer acres would be treated. As with the CalVTP, implementation of SPRs would avoid any substantial adverse change to any built historical resources and TCRs, and compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 would avoid disturbance of human remains. Despite implementation of SPRs, unknown unique archaeological resources or subsurface historical resources could be inadvertently damaged during treatment activities. This would result in the same significant and unavoidable impact as the CalVTP; however, the impact would occur in fewer locations than under the CalVTP. (*Same significant and unavoidable impact*)

Biological Resources

Alternative A would result in similar effects on biological resources than the proposed program, but they would occur across fewer acres, including the same significant and unavoidable impact to special-status bumble bees. As with the proposed program, treatment activities under this alternative could inadvertently damage or destroy special-status plants, fish, wildlife, and their habitat. These effects would be less than the proposed program because fewer treatment activities would occur and less habitat would be affected. Alternative A would implement the same mitigation measures as the proposed program, which would reduce potentially significant impacts on special-status plants and wildlife. However, treatments implemented under this alternative would encounter the same difficulty as the Proposed Program with effectively mitigating impacts to overwintering and nesting special-status bumblebees and this impact would be significant and unavoidable. Adverse long-term effects from treatments under this alternative would be similar to the proposed program; however, any long-term benefits related to ecological restoration would not be realized to the same extent (e.g., at the landscape level) as the proposed program because fewer acres would be treated. Like the proposed program, Alternative A would implement SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-7, BIO-8, and HYD-4 to identify and protect sensitive natural communities and habitats; however, treatment activities could 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 ecological function of sensitive natural communities and habitats. Alternative A would implement Mitigation Measures BIO-3a through c, which would reduce these effects to a less-than-significant level. Alternative A would also result in the same significant effects related to state or federally protected wetlands, movement corridors, and nurseries; and would implement the same mitigation measures to reduce these effects to less than significant. Alternative A would also result in the same less-than-significant effect related to common nesting birds; and, like the proposed program, would have no impact related to conflicts with local policies, ordinances, and plans. Overall, Alternative A would include the same impact mechanisms and the same effects as the proposed program, but these effects would occur across a smaller portion of the treatable landscape. (*Same significant and unavoidable impact*)

##### Greenhouse Gas Emissions

Alternative A would result in the same significant and unavoidable impact as the CalVTP related to GHG emissions from treatment operations. It would include the same GHG emission-generating treatment activities as the CalVTP, though the activities would be implemented on fewer acres than under the CalVTP. This would result in approximately 972,253 MMTCO2e per year less than the CalVTP (see Table 3.8-3 in Section 3.8, “Greenhouse Gas Emissions”), but GHG emissions from treatment activities would still result in a potentially significant and unavoidable contribution to climate change. A purpose of Alternative A, like the CalVTP, is to reduce wildfire risk, which would reduce GHG emissions and increase carbon sequestration over the long-term. This would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. However, because Alternative A would treat fewer acres than the CalVTP, it would result in less wildfire risk reduction and less long-term GHG emission reduction potentially less and carbon sequestration. Even though treatment emissions would be less under Alternative A, the GHG impact of Alternative A would be greater than the CalVTP because it would result in less long-term GHG emission reduction and carbon sequestration than the CalVTP. (*Same significant and unavoidable impact*)

##### Transportation

The transportation effects of Alternative A would be less than the CalVTP because less vehicle use would result from treating the reduced acreage under Alternative A. Like the CalVTP, traffic operations during vegetation treatments would be temporary and localized. Alternative A would implement SPRs that manage and minimize potential hazards because of smoke generated during prescribe burns, require consistency with local traffic operations policies and standards to the extent the project is subject to them, and require that a Traffic Management Plan (TMP) be prepared to manage and minimize potential temporary traffic operations effects resulting from individual vegetation treatment projects. However, the increase in treated acres above existing conditions under this alternative may result in a net increase in VMT to implement treatments. (*Same significant and unavoidable impact)*

##### Public Services, Utilities, and Service Systems

Alternative A would have the same significant and unavoidable impact as the CalVTP, and would generally have lesser effects on public services, utilities, and service systems. Like the CalVTP, Alternative A would result in an increase in the volume of solid organic waste transported offsite to existing biomass power plants, wood product processing facilities, and/or composting facilities for processing. While this increase in solid organic waste would be less than under the CalVTP, it could still exceed the capacity of local solid waste infrastructure in some locations. As with the CalVTP, Alternative A would comply with federal, State, and local management and reduction goals, statutes, and regulations related to solid waste; and would not discernably affect the availability of water supply. (*Same significant and unavoidable impact)*

#### feasibility of alternative A

Alternative A would achieve four of the five objectives of the CalVTP, though to a lesser degree.

Objective 1: Alternative A would achieve Objective 1 because it would increase the pace and scale of treatments that manage the amount and continuity of wildland fire fuels through WUI, fuel break, and ecological restoration treatment activities. While Alterative A would increase the pace and scale of fire fuel treatments compared to existing conditions, it would increase treatments to a lesser extent than the CalVTP.

Objective 2: Alternative A would not achieve the pace and scale described in Objective 2. Executive Order B-52-18 directs the Natural Resources Agency to take necessary steps to achieve vegetation treatments on at least 500,000 acres of non-federal lands per year within five years, which results in a target of approximately 250,000 acres per year for vegetation treatments under the CalVTP after considering other sources of vegetation treatments. Because Alternative A would limit treatments to 60,000 acres per year, other programs would need to treat at least 440,000 acres per year to achieve the statewide target, which is extremely unlikely given resource limitations.

Objective 3: Because Alternative A would limit the extent to which prescribed burning could be applied as a vegetation treatment tool, it would achieve Objective 3 to a lesser degree than the CalVTP.

Objective 4: Alternative A would include less active management and ecological restoration than the CalVTP, and as a result, it would achieve Objective 4 to a lesser degree than the CalVTP.

Objective 5: Because Alternative A would result in less ecological restoration than the CalVTP, it would achieve Objective 5 to a lesser degree than the CalVTP.

Alternative A would treat up to 60,000 acres per year within the approximately 20.3 million acres of treatable landscape. The treatment acreage target under this alternative would be easier to achieve than the CalVTP, because it would seek to treat a smaller number of acres within the same treatable landscape. Alternative A, however, would not attain the key objective of the CalVTP to increase the scale of vegetation treatment to 250,000 acres per year. In addition, Alternative A would attain the remaining four objectives to a lesser degree than the CalVTP.

Because Alternative A would be less effective in meeting the above-described project objectives, Alternative A represents a less vigorous response to the wildfire crisis facing California than does the CalVTP. The Board believes that a more vigorous response is necessary for multiple reasons, including the overall policy objective of minimizing future loss of life and property associated with wildfires, as well as the related policy objective of improving forest health. As noted earlier in these findings, a report of the Governor’s Wildfire Strike Force (2019) observed that:

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. These conditions have resulted in the largest, most destructive, and deadliest wildfires on record in California history. 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).

As environmental conditions become more conducive to larger and more severe wildfires, development in the wildland-urban interface (WUI) is also on the rise. A 2018 study indicates that the number of houses in the WUI increased nationwide by 41 percent between 1990 and 2010 (Radeloff et al. 2018), and it is estimated that approximately 25 percent of the state’s population (more than 11 million people) live in high fire-risk areas, including the WUI (Leventhal Center for Advanced Urbanism 2018). (Final PEIR, Vol. II, Chapter 1, pp. 1-1, 1-3.)

In response to these changing environmental conditions and the increased risk to California’s citizens, former Governor Brown issued Executive Order (EO) B-52-18, which mandates a substantial increase in the pace and scale of vegetation treatments in California to reduce wildfire risk. This executive order included the following factual findings, among others:

* Consistent with California's greenhouse gas emissions goals, the state's forests should be maintained as a net sink rather than a source of greenhouse gas and black carbon emissions;
* Long-term human intervention, including the practice of excluding fire in fire-dependent ecosystems, has resulted in a deterioration of forest health statewide and, in some cases, loss of forest cover;
* These conditions, coupled with drought and the stressors associated with a warming climate, have dramatically increased the size and intensity of wildfires, exposed millions of urban and rural residents to unhealthy air, and led to more than 129 million dead and dying trees since 2010, primarily in the Sierra Nevada;
* Recent wildfires have been the largest, deadliest, most destructive and costliest in state history;
* *The current pace and scale of prescribed fire, fuel reduction, and thinning of overly dense forests average approximately 250,000 acres per year and are far below levels needed to restore and maintain forest health*;

 (Emphasis added.)

Based on these determinations and others, Governor Brown directed that “[t]he Natural Resources Agency shall take all necessary steps to double the total statewide rate of forest treatments within 5 years to at least 500,000 acres per year. To accomplish this goal the Agency will work with the Department of Forestry and Fire Protection, the Department of Parks and Recreation, the Department of Fish and Wildlife, the State Water Resources Control Board, State Conservancies, and all other relevant agencies.” The CalVTP is consistent with this directive, whereas Alternative A would not be.

In addition, Governor Newsom has directed a strike force to develop a comprehensive strategy to address the wildfire crisis, including reducing the severity of wildfires through continued investments in fire mitigation, vegetation management, and other strategies to reduce fuels (Governor Newsom’s Strike Force 2019).

The CalVTP will direct the implementation of vegetation treatments to reduce wildfire risks and avoid or diminish the harmful effects of wildfire on the people, property, and natural resources in the state of California. It will do so on larger scale than would occur under Alternative A, consistent with EO B-52-18. The CalVTP thus has the potential to provide substantially greater public health and safety benefits than Alternative A, as well as a greater potential to contribute to the restoration of forest health on a larger scale. The CalVTP is one of the tools intended to achieve the mandated increase in the pace and scale of fire fuel reduction efforts across the state and respond to the wildfire crisis. 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. Certain wind and weather conditions lead to high-intensity, fast-moving, wind-driven wildfires. Although the most individually destructive, these extreme fires represent a small number of the total fires that occur each year. While vegetation treatments under the CalVTP may not be able to slow or halt the extreme fires, most fires that occur within the state are not highly wind driven, and 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. (Final PEIR, Vol. II, Chapter 1, pp. 1-1, 1-3.)

As explained in the Final EIR in Master Response 1 (Effectiveness of the CalVTP in Reducing Wildfire Risk), vegetation treatment is the primary approach to wildfire management because it can reduce the intensity and severity of wildfire, slowing fire movement and creating favorable conditions for firefighting to protect targeted, high-value resources (Carey and Schumann 2003; Prichard et al. 2010). Fuel reduction has proven successful where it is targeted at protecting specific resources in limited geographic areas, such as in areas of extreme fire danger or in the WUI (Loudermilk et al. 2014). Areas that are treated often exhibit different fire progression characteristics and reduced fire severity compared to areas that are not treated (Lydersen et al. 2017; Johnson and Kennedy 2019). Reducing fuels through mechanical treatments and prescribed fire has been found to be effective at reducing fire frequency, fire severity, and annual area burned when applied at the landscape scale over an extended period (Kim et al. 2013; Martinson and Omi 2013; Prichard and Kennedy 2014; Tubbesing et al. 2019). These effects have also been found to be most effective during extreme weather conditions (i.e., hotter and drier). At these times, there is also a higher likelihood that fires will intersect with treated areas, which contributes to higher effectiveness of those treatments at reducing wildfire behavior and effects (Cassell 2018). Another study found simulated fuel treatments in the Lake Tahoe Basin returned the forest to more historic and fire-resilient conditions, reduced wildfire risk and severity, controlled wildfire carbon emissions, and in the long run, resulted in a net carbon gain (Loudermilk et al. 2014). In another study, mechanical treatments followed by prescribed burning produced the strongest results, with more resilient forest structures, lower surface fuel loads, and a reduced rate of accumulation of surface fuels (Schwilk et al. 2009).

It has also been found that fuel treatments are most effective when wildfires are driven by typical weather situations where prevailing seasonal conditions of temperature, soil/fuel, and moisture contents are present. In circumstances where extreme weather conditions exist, such as in cases of extremely low humidity and very high winds, fuel treatments are less effective (Brown et al. 2008), particularly when persistently high winds can blow hot embers over long distances. While evidence has not definitively concluded that forest fuel treatments lead to a reduction in the overall size of a fire (USFS 2009; Schoennagel et al. 2017), such treatments can aid in protecting public safety and homes and other structures by reducing wildfire intensity and severity in treated areas under normal fire conditions and by increasing firefighting effectiveness (Kalies and Yocom Kent 2016). Where treatments have occurred, the pattern of wildfire progression may be limited in some areas to low-intensity underbrush and surface burning, which can create safer conditions for firefighters to successfully suppress fires in areas near homes or other structures, or around areas of high resource value. Fuel treatments also promote faster postfire forest recovery by causing less damage to soils and leaving some live vegetation within burn areas (USFS 2009), increasing seedling regeneration (Tubbesing et al. 2019), protecting resources such as soils, wildlife, riparian function, and wetlands (Kim et al. 2013), and reducing drought-related tree mortality (Restaino et al. 2019).

In summary, the CalVTP, compared with Alternative A, has a greater potential to save life and property and to restore forest health across the State, consistent with the above-described project objectives and EO B-52-18.

For all of these reasons and any of them individually, the Board rejects Alternative A as infeasible.

### Alternative B: WUI Fuel Reduction Only

(See Final PEIR, Vol. II, Chapter 6, § 6.2.3.)

Alternative B would seek to treat approximately 250,000 acres per year entirely within the WUI. This alternative is intended to avoid or substantially lessen environmental impacts that could result from fuel break and ecological restoration treatments, such as degradation of biological resources, soils, or water quality. Because the application of prescribed burning would be reduced under this alternative, it would also reduce air quality impacts. Alternative B incorporates recommendations provided in scoping comments on the NOP and on comments in previous draft environmental documents related to the VTP that suggested focusing vegetation treatments near developed communities and avoiding large-scale vegetation management outside of these areas.

As described in more detail in the Final PEIR, Vol. II, section 2.5.1.1, the WUI is the geographic interface between wildland and structures where buildings and vegetation are sufficiently close that a wildland fire could spread to a structure or a structure fire could ignite wildland vegetation. Under Alternative B, WUI fuel reduction treatments would be the only treatment type implemented under the CalVTP. These treatments would be intended to: 1) directly protect communities and assets at risk from potential damage from wildfires originating in the adjacent wildlands, 2) protect the wildlands from fires starting in or near development, and 3) reduce flammable vegetation to improve emergency access to, and evacuation from, communities in the WUI. No fuel break or ecological restoration treatments would occur as part of Alternative B.

Activities implemented under Alternative B would occur outside of the 100-foot defensible space requirements under PRC section 4291 and within the outer edge of the defined WUI. The modeled WUI fuel reduction treatment areas within the treatable landscape are shown in Figure 2-3 in Chapter 2, “Program Description.” The WUI portion of the treatable landscape encompasses approximately 10.1 million acres, which is approximately half of the treatable landscape. Specific locations for WUI fuel reduction treatments would be prioritized based on an evaluation of the topography, fuel loading, and proximity to communities. Because Alternative B would seek to treat the same number of acres per year as the CalVTP and would condense all treatment activities into the WUI, it would result in a substantial increase in the pace and scale of WUI fuel reduction treatments compared to the CalVTP. As with the CalVTP, the actual acres treated annually would fluctuate based on several factors such as the number of willing landowners, funding ability, and access constraints; it would take several years to “ramp up” from the current treatment acreage to the CalVTP treatment acreage.

Under Alternative B, WUI fuel reduction treatment would occur in all fuel types (i.e., tree, shrub, and grass). Treatment activities would be the same as those described for the CalVTP. These activities would include a combination of prescribed burning, mechanical treatments, manual treatment, prescribed herbivory, and herbicide application. As with the CalVTP, the treatment activity or combination of activities for a specific treatment site would be selected based on the site-specific characteristics and objectives of the treatment site.

#### Potential impacts of alternative B

Alternative B would avoid a significant and unavoidable impact associated with long-term substantial degradation of aesthetics and visual resources because it would not include non-shaded fuel breaks. It could also result in slightly reduced impacts to biological resources because treatment activities would be confined to the WUI, which is subject to relatively more existing disturbance than other treatment areas. However, this alternative would result in greater impacts associated with GHG emissions; hazardous materials; public health and safety; noise; and transportation.

##### Aesthetics & Visual Resources

Alternative B would avoid the significant and unavoidable impact of the CalVTP because it would not include non-shaded fuel break treatments (the fuel break treatment type is not included in this alternative). Non-shaded fuel breaks could result in a long-term adverse change in the landscape by resulting in a contrasting linear element in an otherwise natural environment. As with the CalVTP, the visual effects of implementing treatments would be short-term, temporary, and would implement SPR AES-2 to minimize visual impacts from the presence of treatment equipment. Like the CalVTP, the long-term effects of most treatments would be visible, but 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. (*Avoids the significant and unavoidable impact*)

##### Air Quality

Alternative B would result in the same significant and unavoidable air quality impacts as the CalVTP and would result in a similar level of air pollutant emissions because Alternative B would include the same treatment activities and would seek to treat the same number of acres each year as the CalVTP. Alternative B would result in a significant and unavoidable impact because it would generate emissions of criteria air pollutants and precursors during treatment activities that would exceed CAAQS or NAAQS. As with the CalVTP, Alternative B would also result in a significant and unavoidable impact because prescribed burns could result in objectionable odors and the short-term exposure of people to concentrations of TACs associated with an acute health risk. Other impacts related to diesel particulate matter, fugitive dust containing naturally occurring asbestos, and objectionable odors from diesel exhaust would be less than significant, like the CalVTP. Overall, the air quality effects of the Alternative B would be similar to the CalVTP and the same significant and unavoidable impacts would remain. (*Same significant and unavoidable impacts*)

##### Archaeological, Historical, & Tribal Cultural Resources

The effects of Alternative B on archeological, historic, and TCRs would be similar to the CalVTP. As with CalVTP, Implementation of SPRs would avoid any substantial adverse change to any built historical resources and TCRs, and compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 would avoid disturbance of human remains. Despite implementation of SPRs, unknown unique archaeological resources or subsurface historical resources could be inadvertently damaged during treatment activities. This would result in the same significant and unavoidable impact as the CalVTP. (*Same significant and unavoidable impact*)

Biological Resources

Alternative B would result in similar types of, but slightly less severe effects on biological resources than the proposed program. It would result in the same significant and unavoidable impact to special-status bumblebees. As with the proposed program, treatment activities under this alternative could inadvertently damage or destroy special-status plants, fish, wildlife, and their habitat. These effects could be slightly less than the proposed program because all treatment activities would occur in the WUI, which, because of its location adjacent to development and associated disturbance, would likely include less suitable habitat for some but not all special-status wildlife species. Alternative B would implement the same mitigation measures as the proposed program, which would reduce potentially significant impacts on special-status plants and wildlife. However, treatments implemented under this alternative would encounter the same difficulty as the Proposed Program with effectively mitigating impacts to overwintering and nesting special-status bumblebees and this impact would be significant and unavoidable. Adverse long-term effects from treatments under this alternative would be slightly less severe than the proposed program and any long-term benefits related to ecological restoration would not be realized to the same extent (e.g., at the landscape level) as the proposed program because treatments would be concentrated in a smaller geographic area. Like the proposed program, Alternative B would implement SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-7, BIO-8, and HYD-4 to identify and protect sensitive natural communities and habitats, however treatment activities could 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 ecological function of sensitive natural communities and habitats. Alternative B would implement Mitigation Measures BIO-3a through c, which would reduce these effects to a less-than-significant level. Alternative B would also result in the same significant effects related to state or federally protected wetlands, movement corridors, and nurseries; and would implement the same mitigation measures to reduce these effects to less than significant. Additionally, Alternative B would result in the same less-than-significant effect related to common nesting birds; and, like the proposed program, would have no impact related to conflicts with local policies, ordinances, and plans. Overall, Alternative B would include the same impact mechanisms and the same effects as the proposed program. These effects could be slightly less than the proposed program because all treatment activities would occur in the WUI, which could contain less habitat for some special status species because of the proximity to development and existing disturbance associated with adjacent development. (*Same significant and unavoidable impact*)

##### Greenhouse Gas Emissions

Alternative B would result in the same significant and unavoidable impact as the CalVTP related to GHG emissions from treatment operations. It would include the same GHG emission-generating treatment activities across the same number of acres as the CalVTP. GHG emissions from treatment activities under this alternative would result in a potentially significant and unavoidable contribution to climate change. A purpose of Alternative B, like the CalVTP, is to reduce wildfire risk, which would reduce GHG emissions and increase carbon sequestration over the long-term. This would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. However, because Alternative B would restrict vegetation management to within the WUI, it would not reduce wildfire risk through fuel breaks or ecological restoration treatments outside of the WUI. With this approach, the extent and intensity of wildfires that occur outside the WUI would not be affected. Thus, Alternative B would result in less long-term GHG emission reduction and potentially less carbon sequestration in the approximately 10.2 million acres of treatable landscape outside of the WUI. For this reason, the GHG impact of Alternative B would be greater than the CalVTP. (*Same significant and unavoidable impact*)

##### Transportation

The transportation effects of Alternative B would be similar to, but greater than, the CalVTP for most impact considerations. Alternative B would result in a similar amount of vehicle use, but traffic associated with treatments would be concentrated in the WUI. Vehicle use in the WUI would be closer to existing development where it would be more likely to affect public roadways than fuel break or ecological restoration treatments, which could occur on partially on roads that are remote, closed to the public, or otherwise receive very little public traffic. Like the CalVTP, traffic operations during vegetation treatments would be temporary and localized. Alternative B would implement SPRs that manage and minimize potential hazards because of smoke generated during prescribed burns, require consistency with local traffic operations policies and standards to the extent the project is subject to them, and require that a TMP be prepared to manage and minimize potential temporary traffic operations effects resulting from individual vegetation treatment projects. The increase in treated acres above existing conditions under this alternative may result in a net increase in VMT to implement treatments; however, because this alternative would be implemented near development, VMT may be less than under the CalVTP, but still may increase over existing conditions. (*Same significant and unavoidable impact)*

##### Public Services, Utilities, and Service Systems

Alternative B would have the same significant and unavoidable impact as the CalVTP, and would generally have similar effects on public services, utilities, and service systems. Like the CalVTP, Alternative B would result in a similar increase in the volume of solid organic waste transported offsite to existing biomass power plants, wood product processing facilities, and/or composting facilities for processing, which could exceed the capacity of local solid waste infrastructure. As with the CalVTP, Alternative B would comply with federal, State, and local management and reduction goals, statutes, and regulations related to solid waste; and would not discernably affect the availability of water supply. (*Same significant and unavoidable impact)*

#### feasibility of alternative B

Alternative B would achieve three of the five objectives of the CalVTP to some degree.

Objective 1: Alternative B would achieve Objective 1 to a lesser degree than the CalVTP because it would seek to treat 250,000 acres per year to reduce the amount and continuity of wildland fire fuels through WUI fuel reduction treatments, which would help to implement Goal 5 of California’s 2018 Strategic Fire Plan. It would forgo opportunities to manage wildland fire fuels outside of the WUI but would substantially increase the treatment of fuels within the WUI. Because this alternative would not treat vegetation outside of the WUI, it would not be as effective as the CalVTP in reducing wildfire risk overall. Without comprehensive vegetation treatment, the continuity of wildland fire fuels and associated risk of wildfire outside of the WUI would be higher under this alternative.

Objective 2: Alternative B would achieve Objective 2 to the same degree as the CalVTP by providing a streamlined environmental review approach to increase the pace and scale of vegetation treatments. It would seek to treat 250,000 acres per year within the WUI.

Objective 3: Alternative B would achieve Objective 3 to a lesser degree than the CalVTP. It would increase the use of prescribed burning as a vegetation treatment tool in the WUI but would not increase the use of prescribed burning elsewhere.

Objective 4: Alternative B would not achieve Objective 4. Because Alternative B would limit treatment activities to the approximately 10.1 million acres of treatable landscape within the WUI, it would not include management actions in much of California’s forests and other natural and working lands necessary to achieve the goals of the Forest Carbon Plan or 2017 Climate Change Scoping Plan.

Objective 5: Alternative B would not achieve Objective 5.

Alternative B would seek to treat 250,000 acres per year within the approximately 10.1 million acres of the treatable landscape within the WUI. This alternative could be more difficult to implement than the CalVTP, because it would seek to treat the same number of acres within approximately half of the treatable landscape extent. Therefore, it could be more difficult to identify and plan enough treatment activities to achieve the treatment target within this more limited area.

Alternative B would treat up to 250,000 acres per year within the approximately 10.1 million acres of WUI, approximately half of the treatable landscape. The treatment acreage target under this alternative may be more difficult to achieve than the CalVTP, because it would seek to treat the same number of acres but within half the same treatable landscape. Alternative B would not be as effective as the CalVTP in reducing wildfire risk overall. Without comprehensive vegetation treatment, the continuity of wildland fire fuels and associated risk of wildfire outside of the WUI would be higher under this alternative. As described above, Alternative B would not attain two of the five objectives and would attain the remaining three objectives to a lesser degree than the CalVTP.

Importantly, by limiting vegetation treatment activities to landscapes within the WUI, Alternative B would forego opportunities to facilitate improved forest health in areas beyond the WUI. The limitations on treatable areas embodied in Alternative B would not be consistent with Executive Order B-52-18 issued by former Governor Brown. In promulgating that directive, the former governor found that “long-term human intervention, including the practice of excluding fire in fire-dependent ecosystems, has resulted in a deterioration of forest health statewide and, in some cases, loss of forest cover[.]” He also found that “the current pace and scale of prescribed fire, fuel reduction, and thinning of overly dense forests average approximately 250,000 acres per year and are far below levels needed to restore and maintain forest health,” and that “the diversity of California's forests and tree species and unique climates require regionalized strategies to identify the areas that pose the greatest threat to forest health and offer the best solutions[.]” For these reasons, as well as others, Governor Brown directed that “[t]he Natural Resources Agency shall take all necessary steps to double the total statewide rate of forest treatments within 5 years to at least 500,000 acres per year.” The Board understands that, consistent with the referenced ecological benefits of vegetation treatment, much of this increased acreage for treatment should occur in areas outside the WUI where past fire suppression efforts and other human causes have led to reduced forest health. Such activities would also be consistent with the State’s Forest Carbon Plan, which, as former Governor Brown stated in EO B-52-18, “has been developed by state agencies to provide consensus forest practices that will achieve resilient forests that can withstand and adapt to wildfire, drought and a changing climate, safeguard the state's water supply, and ensure the state's forests operate as a carbon sink.”

Notably, as described in chapter 6 of the Final PEIR (Vol. II, Chapter 6, at p. 6-18), the California Air Resources Board’s 2017 Climate Change Scoping Plan describes strategies to maintain natural and working lands as a net carbon sink, including enhancing the resilience and carbon sequestration potential of these lands through restoration, management, and the reduction of wildfire emissions. These strategies require management actions throughout natural and working lands in the state, much of which are outside of the WUI. The Forest Carbon Plan identifies strategies to reduce wildfire emissions and increase carbon sequestration in forested portions of the state. It describes forest characteristics that should be used to prioritize areas for management actions, including: forests at the greatest risk of high-severity events, overly dense forests, forests at risk of climatic-driven stressors, and areas with high habitat values at risk (Forest Climate Action Team 2018:45). Much of these priority areas occur outside of the WUI. Because Alternative B would limit treatment activities to the approximately 10.1 million acres of treatable landscape within the WUI, it would not include management actions in much of California’s forests and other natural and working lands necessary to achieve the goals of the Forest Carbon Plan or 2017 Climate Change Scoping Plan.

As described in Section 2.5.1 of Volume II of the Final PEIR, areas suitable for implementation of the ecological restoration treatment type were identified by excluding the WUI fuel reduction treatable area and intersecting the remaining treatable acreage with land identified as Condition Class 2 or 3. As explained in the Final EIR in Master Response 1 (Effectiveness of the CalVTP in Reducing Wildfire Risk), scholarly studies have demonstrated the ecological benefits associated with vegetation treatment. A 2014 study found that simulated fuel treatments in the Lake Tahoe Basin returned the forest to more historic and fire-resilient conditions, reduced wildfire risk and severity, controlled wildfire carbon emissions, and in the long run, resulted in a net carbon gain (Loudermilk et al. 2014). In another study, mechanical treatments followed by prescribed burning produced the strongest results, with more resilient forest structures, lower surface fuel loads, and a reduced rate of accumulation of surface fuels (Schwilk et al. 2009). Fuel treatments also promote faster postfire forest recovery by causing less damage to soils and leaving some live vegetation within burn areas (USFS 2009), increasing seedling regeneration (Tubbesing et al. 2019), protecting resources such as soils, wildlife, riparian function, and wetlands (Kim et al. 2013), and reducing drought-related tree mortality (Restaino et al. 2019). (Final PEIR, Vol. I, Chapter 2, § 2.2, p. 2-6–2-10.)

As explained in Master Response 3 (Vegetation Treatments in Chaparral and Coastal Sage Scrub), the objective of the ecological restoration treatment type is to restore degraded, damaged, or destroyed ecosystems and habitats in fire-adapted vegetation types by returning them to their natural fire regime and returning vegetation in Condition Classes 2 and 3 to Condition Class 1. (Final PEIR, Vol. I, Chapter 2, § 2.2.3, p. 2-11.) One benefit of the use of vegetation treatment for ecological restoration is the opportunity to reduce or eliminate non-native vegetation. As the Final EIR explains, “[t]reatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and they will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles.” (Final PEIR, App. I, Chapter 2, § 2.3.1, pp. 2-68–2-69 [response to comment A20-21].) Vegetation treatment beyond the WUI, then, can assist with statewide efforts to control the spread of noxious non-native plants.

For all of these reasons and any of them individually, the Board rejects Alternative B as infeasible.

### Alternative C: Modified WUI Fuel Reduction and Fuel Breaks

(See Final PEIR, App. II, Chapter 6, § 6.2.4.)

Alternative C would seek to treat approximately 250,000 acres per year through a combination of WUI fuel reduction and fuel break treatments only. This alternative would also prohibit the use of prescribed burning within chaparral and coastal sage scrub vegetation types. It is intended to avoid or substantially lessen environmental impacts that could result from ecological restoration treatments, such as degradation of biological resources, soils, or water quality. Because the application of prescribed burning would be reduced under this alternative it would also reduce air quality impacts. Similar to the CalVTP, this alternative is intended to avoid the potential for the large-scale conversion of chaparral and coastal sage scrub vegetation types to other vegetation types; however, this alternative avoids type conversion by prohibiting prescribed burning in these areas altogether. This alternative also responds to several comments provided on the NOP and on previous versions of the CalVTP, which advocate for including an alternative similar to the Fire Management Plan for the Santa Monica Mountains National Recreation Area, which minimizes prescribed burning within chaparral and coastal sage scrub vegetation types.

Alternative C would include similar WUI fuel reduction treatments as described for Alternative B, above. In addition to WUI fuel reduction treatments, Alternative C would include establishing shaded or non-shaded fuel breaks in strategic areas where flammable vegetation can be modified to reduce fire spread to structures and/or natural resources, while providing a safer location for firefighters to fight fires. WUI fuel reduction and fuel break treatments would be the only treatment types implemented under the CalVTP. These treatments would be intended to: 1) directly protect communities and assets at risk from potential damage from wildfires originating in the adjacent wildlands, 2) protect the wildlands from fires starting in or near development, 3) reduce flammable vegetation to improve emergency access to, and evacuation from, communities, and 4) modify fuels in strategic locations to improve the effectiveness of active wildland fire suppression efforts. These treatments would occur within the approximately 12.4 million acres of the treatable landscape that are appropriate for WUI and/or fuel break treatments. Because Alternative C would seek to treat the same number of acres per year as the CalVTP through fewer treatment types, it would result in a substantial increase in the extent and pace of WUI fuel reduction and fuel break treatments, similar to the CalVTP. As with the CalVTP, the actual number of total acres treated annually would fluctuate.

Alternative C would include WUI fuel reduction and fuel break treatments in all fuel types (i.e., tree, shrub, and grass), but would not include ecological restoration treatments. It would include a combination of prescribed burning, mechanical treatments, manual treatment, prescribed herbivory, and herbicide application. However, Alternative C would not include the use of prescribed fire treatments within chaparral and coastal sage scrub vegetation types. Comments on the NOP expressed concern regarding the potential for large-scale type conversion of these vegetation types. Type conversion of chaparral and coastal sage scrub habitats means a change from a vegetation type dominated by native shrub species that are characteristic of chaparral and coastal sage scrub vegetation alliances to a vegetation type characterized predominantly by weedy herbaceous cover or annual grasslands. Short fire-return intervals of less than 10 to 15 years can lead to type conversion by prohibiting shrub regeneration (Underwood et al. 2018). This alternative takes a different approach than the CalVTP to avoid the potential for type conversion. Under this alternative, WUI and fuel break treatments in chaparral and coastal sage scrub vegetation types would employ only non-burning methods such as prescribed herbivory, herbicide application, or manual treatment that can be focused on target species or treatment intensities that would not result in type conversion.

#### Potential impacts of alternative C

Alternative C would not reduce environmental impacts associated with any environmental resource area. This alternative would result in greater impacts related to aesthetics and visual resources, and GHG emissions, and slightly greater impacts associated with hazardous materials, noise, and transportation.

##### Aesthetics & Visual Resources

Under Alternative C, the same treatment activities as the CalVTP could affect aesthetics and visual resources. These treatment activities would be concentrated in fuel break areas and the WUI. To achieve the same treatment target as the CalVTP without ecological restoration treatments, Alternative C would increase the amount of other treatment types, including non-shaded fuel breaks, which could result in a long-term adverse change in the landscape by resulting in a contrasting linear element in an otherwise natural environment. This would result in a greater significant and unavoidable impact than the CalVTP. As with the CalVTP, the visual effects of implementing treatments would be short-term, temporary, and would implement SPR AES-2 would minimize visual impacts from the presence of treatment equipment. Like the CalVTP, the long-term effects of most treatments would be visible, but 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. Because Alternative C would include more non-shaded fuel breaks, it would result in a greater impact than the CalVTP. (*Same significant and unavoidable impact*)

##### Air Quality

Alternative C would result in the same three significant and unavoidable air quality impacts as the CalVTP and would result in a similar level of air pollutant emissions because Alternative C would include similar treatment activities and would seek to treat the same number of acres each year. Alternative C would result in a significant and unavoidable impact because it would generate emissions of criteria air pollutants and precursors during treatment activities that would exceed CAAQS or NAAQS. As with the CalVTP, Alternative C would also result in a significant and unavoidable impact because prescribed burns could result in objectionable odors and the short-term exposure of people to concentrations of TACs associated with an acute health risk, although this risk could be slightly lower because prescribed burning would not occur in chaparral or coastal scrub communities. Other impacts related to diesel particulate matter, fugitive dust containing naturally occurring asbestos, and objectionable odors from diesel exhaust would be less than significant, like the CalVTP. Overall, the air quality effects of the Alternative C would be similar to, the CalVTP and the same significant and unavoidable impacts would remain. (*Same significant and unavoidable impacts*)

##### Archaeological, Historical, & Tribal Cultural Resources

The effects of Alternative C on archeological, historic, and TCRs would be similar to the CalVTP. As with the CalVTP, Implementation of SPRs would avoid any substantial adverse change to any built historical resources and TCRs, and compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 would avoid disturbance of human remains. Despite implementation of SPRs, unknown unique archaeological resources or subsurface historical resources could be inadvertently damaged during treatment activities. This would result in the same significant and unavoidable impact as the CalVTP. (*Same significant and unavoidable impact*)

Biological Resources

Alternative C would result in similar effects on biological resources as the proposed program. It would result in the same significant and unavoidable impact to special-status bees. As with the proposed program, treatment activities under this alternative could inadvertently damage or destroy special-status plants, fish, wildlife, and their habitat. Alternative C would implement the same mitigation measures as the proposed, which would minimize or avoid potentially significant impacts on special-status plants and wildlife. However, treatments implemented under this alternative would encounter the same difficulty as the Proposed Program with effectively mitigating impacts to overwintering and nesting special-status bumblebees and this impact would be significant and unavoidable. Adverse long-term effects from treatments under this alternative would be similar to the proposed program and any long-term benefits related to ecological restoration would not be realized to the same extent (e.g., to as many species and vegetation communities) as the proposed program because treatments would be concentrated in a smaller geographic area. Like the proposed program, Alternative C would implement SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-7, BIO-8, and HYD-4 to identify and protect sensitive natural communities and habitats, however treatment activities could 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 ecological function of sensitive natural communities and habitats. Alternative C would avoid the potential for type conversion in chaparral and coastal scrub habitats because it would not include prescribed burning in these areas. The potential for type conversion in these habitats could occur through other intensive treatment activities, and Alternative C would implement the applicable elements of Mitigation Measures BIO-3a through c, which would reduce effects on sensitive natural communities to a less-than-significant level. Alternative C would also result in the same significant effects related to state or federally protected wetlands, movement corridors, and nurseries; and would implement the same mitigation measures to reduce these effects to less than significant. Alternative C would also result in the same less-than-significant effect related to common nesting birds; and, like the proposed program, would have no impact related to conflicts with local policies, ordinances, and plans. Overall, Alternative C would include the same impact mechanisms with the exception of prescribed burning in some habitats. Treatments would occur in fuel break areas and in the WUI across the same number of acres as the proposed program. While treatment locations would vary from the proposed program and Alternative C would take a different approach to avoiding type conversion in some habitats, the effects would be generally similar in part because the proposed program and Alternative C would both avoid type conversion of chaparral and coastal sage scrub as required by Senate Bill 1260, Statutes of 2018. (*Same significant and unavoidable cumulative impact*)

##### Greenhouse Gas Emissions

Alternative C would result in the same significant and unavoidable impact as the CalVTP related to GHG emissions from treatment operations. It would include the same GHG emission-generating activities across the same number of acres as the CalVTP. GHG emissions from treatment activities under this alternative would result in a potentially significant and unavoidable contribution to climate change. As with the CalVTP, a purpose of Alternative C is to reduce wildfire risk, which would reduce GHG emissions and increase carbon sequestration over the long-term. This would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. However, because Alternative C would restrict vegetation treatments to fuel breaks and WUI treatments, it would not reduce wildfire risk through ecological restoration treatments. With this approach, Alternative C would not restore ecosystem processes, conditions, and resiliency by modifying uncharacteristic wildland fuel conditions to more closely reflect vegetative conditions that would occur under a natural fire return interval. Thus, Alternative C would result in less long-term GHG emission reduction and potentially less carbon sequestration in the approximately 7.9 million acres of treatable landscape outside of the WUI and fuel break treatment areas. For this reason, the GHG impact of Alternative C would be greater than the CalVTP. (*Same significant and unavoidable impact*)

##### Transportation

The transportation effects of Alternative C would be similar to, but slightly greater than, the CalVTP for most impact considerations. Alternative C would result in a similar amount of vehicle use, but more traffic associated with treatments would occur in the WUI. Vehicle use in the WUI would be closer to existing development where it would be more likely to affect public roadways than fuel break or ecological restoration treatments, which could occur on partially on roads that are remote, closed to the public, or otherwise receive very little public traffic. Like the CalVTP, traffic operations during vegetation treatments would be temporary and localized. Alternative C would implement SPRs that manage and minimize potential hazards because of smoke generated during prescribe burns, require consistency with local traffic operations policies and standards to the extent the project is subject to them, and require that a TMP be prepared to manage and minimize potential temporary traffic operations effects resulting from individual vegetation treatment projects. The increase in treated acres above existing conditions under this alternative may result in a net increase in VMT to implement treatments; however, because this alternative would be implemented near development, VMT may be less than under the CalVTP, but still may increase over existing conditions. (*Same significant and unavoidable impact*)

##### Public Services, Utilities, and Service Systems

Alternative C would have the same significant and unavoidable impact as the CalVTP, and would generally have similar effects on public services, utilities, and service systems. Like the CalVTP, Alternative C would result in a similar increase in the volume of solid organic waste transported offsite to existing biomass power plants, wood product processing facilities, and/or composting facilities for processing, which could exceed the capacity of local solid waste infrastructure. As with the CalVTP, Alternative C would comply with federal, State, and local management and reduction goals, statutes, and regulations related to solid waste; and would not discernably affect the availability of water supply. (*Same significant and unavoidable impact)*

#### feasibility of alternative C

Alternative C would achieve three of the five objectives of the CalVTP to some degree.

Objective 1: Alternative C would achieve Objective 1 to a similar degree as the CalVTP because Alternative C would seek to treat 250,000 acres per year to reduce the amount and continuity of wildland fire fuels through WUI and fuel break treatment activities, which would help to implement Goal 5 of California’s 2018 Strategic Fire Plan. Alternative C would forgo opportunities to manage wildland fire fuels through ecological restoration treatments but would substantially increase WUI fuel reduction and fuel break treatments. It would also limit the frequency of prescribed burning within certain vegetation types.

Objective 2: Alternative C would achieve Objective 2 to the same degree as the CalVTP by providing a streamlined environmental review approach to increase the pace and scale of vegetation treatments.

Objective 3: Alternative C would achieve Objective 3, but to a lesser degree than the CalVTP. It would increase the use of prescribed burning as a vegetation treatment tool in the WUI and in fuel breaks, but would not increase the use of prescribed burning in chaparral or coastal sage scrub, or outside of the WUI and fuel break treatment areas.

Objective 4: Alternative C would not achieve Objective 4 because it would not include implementation of management actions in much of California’s forests and other natural and working lands necessary to achieve the goals of the Forest Carbon Plan and 2017 Climate Change Scoping Plan.

Objective 5: Alternative C would not achieve Objective 5 because this alternative would not include ecological restoration treatments that would restore fire resiliency in target fire-adapted plant communities by restoring degraded, damaged, or destroyed ecosystems and habitats to conditions associated with a natural fire regime.

Alternative C would seek to treat 250,000 acres per year within the approximately 12.4 million acres of the treatable landscape within the modeled WUI fuel reduction and modeled fuel break treatment areas. This alternative could be more difficult to implement than the CalVTP, because it would seek to treat the same number of acres within a smaller portion of the treatable landscape, using only two treatment types, and without the use of prescribed burning within certain vegetation types. Therefore, it could be more difficult to identify and plan enough treatment activities within this more limited area available for treatment. With the exception of prescribed burning in certain vegetation types, this alternative would include the same range of treatment activities as the CalVTP. This would provide project proponents with a range of options to achieve the target treatment acres. However, Alternative C does not provide project proponents with the opportunity to restore fire-adapted ecosystems across the landscape, which may result in extreme wildfires that threaten ecological health.

Importantly, by limiting vegetation treatment activities to landscapes within the WUI and to areas in which fuel breaks would be created, Alternative C would forego opportunities to facilitate improved forest health in areas beyond the WUI and areas where fuel breaks would occur. As is the case with Alternative B, the limitations on treatable areas embodied in Alternative C would not be consistent with Executive Order B-52-18 issued by former Governor Brown. In promulgating that directive, the former governor found that “long-term human intervention, including the practice of excluding fire in fire-dependent ecosystems, has resulted in a deterioration of forest health statewide and, in some cases, loss of forest cover[.]” He also found that “the current pace and scale of prescribed fire, fuel reduction, and thinning of overly dense forests average approximately 250,000 acres per year and are far below levels needed to restore and maintain forest health,” and that “the diversity of California's forests and tree species and unique climates require regionalized strategies to identify the areas that pose the greatest threat to forest health and offer the best solutions[.]” For these reasons, as well as others, Governor Brown directed that “[t]he Natural Resources Agency shall take all necessary steps to double the total statewide rate of forest treatments within 5 years to at least 500,000 acres per year.” The Board understands that, consistent with the referenced ecological benefits of vegetation treatment, much of this increased acreage for treatment should occur in areas outside the WUI where past fire suppression efforts and other human causes have led to reduced forest health. Such activities would also be consistent with the State’s Forest Carbon Plan, which, as former Governor Brown stated in EO B-52-18, “has been developed by state agencies to provide consensus forest practices that will achieve resilient forests that can withstand and adapt to wildfire, drought and a changing climate, safeguard the state's water supply, and ensure the state's forests operate as a carbon sink.”

Notably, as described in chapter 6 of the Final PEIR (Vol. II, Chapter 6, at p. 6-18), the California Air Resources Board’s 2017 Climate Change Scoping Plan describes strategies to maintain natural and working lands as a net carbon sink, including enhancing the resilience and carbon sequestration potential of these lands through restoration, management, and the reduction of wildfire emissions. These strategies require management actions throughout natural and working lands in the state, much of which are outside of the WUI. The Forest Carbon Plan identifies strategies to reduce wildfire emissions and increase carbon sequestration in forested portions of the state. It describes forest characteristics that should be used to prioritize areas for management actions, including: forests at the greatest risk to high-severity events, overly dense forests, forests at risk of climatic-driven stressors, and areas with high habitat values at risk (Forest Climate Action Team 2018:45). Much of these priority areas occur outside of the WUI. Because Alternative C would limit treatment activities, with the exception of creating fuel breaks, to the approximately 10.1 million acres of treatable landscape within the WUI, it would not include management actions in much of California’s forests and other natural and working lands necessary to achieve the goals of the Forest Carbon Plan or 2017 Climate Change Scoping Plan.

As described in Section 2.5.1 of Volume II of the Final PEIR, areas suitable for implementation of the ecological restoration treatment type were identified by excluding the WUI fuel reduction treatable area and intersecting the remaining treatable acreage with land identified as Condition Class 2 or 3. As explained in the Final EIR in Master Response 1 (Effectiveness of the CalVTP in Reducing Wildfire Risk), scholarly studies have demonstrated the ecological benefits associated with vegetation treatment. A 2014 study found that simulated fuel treatments in the Lake Tahoe Basin returned the forest to more historic and fire-resilient conditions, reduced wildfire risk and severity, controlled wildfire carbon emissions, and in the long run, resulted in a net carbon gain (Loudermilk et al. 2014). In another study, mechanical treatments followed by prescribed burning produced the strongest results, with more resilient forest structures, lower surface fuel loads, and a reduced rate of accumulation of surface fuels (Schwilk et al. 2009). Fuel treatments also promote faster postfire forest recovery by causing less damage to soils and leaving some live vegetation within burn areas (USFS 2009), increasing seedling regeneration (Tubbesing et al. 2019), protecting resources such as soils, wildlife, riparian function, and wetlands (Kim et al. 2013), and reducing drought-related tree mortality (Restaino et al. 2019). (Final PEIR, Vol. I, Chapter 2, § 2.2.1, p. 2-6–2-10.)

As explained in Master Response 3 (Vegetation Treatments in Chaparral and Coastal Sage Scrub), the objective of the ecological restoration treatment type is to restore degraded, damaged, or destroyed ecosystems and habitats in fire-adapted vegetation types by returning them to their natural fire regime and returning vegetation in Condition Classes 2 and 3 to Condition Class 1. (Final PEIR, Vol. I, Chapter 2, § 2.2.3, p. 2-11.) One benefit of the use of vegetation treatment for ecological restoration is the opportunity to reduce or eliminate non-native vegetation. As the Final EIR explains, “[t]reatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and they will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles.” (Final PEIR, Vol. I, Chapter 2, § 2.3.1, pp. 2-68–2-69 [response to comment A20-21].) Vegetation treatment beyond the WUI, then, can assist with statewide efforts to control the spread of noxious non-native plants.

By precluding ecosystem restoration treatments and prescribed burning in certain vegetation types, Alternative C would limit the treatment options available and would not promote wildland resiliency and reduce fuel levels away from fuel breaks and the WUI. This could result in wildfires occurring at higher intensities across larger areas in areas away from fuel breaks and the WUI, making them more difficult to control. Additionally, because ecosystem restoration would promote resiliency in fire-adapted vegetation communities, it is reasonable to expect that as ecosystems are restored, the vegetation would regenerate more quickly after a wildfire, which would reduce landslide risk in burned areas. (Final PEIR, Vol. II, Chapter 6, § 6.2.4, p. 6-30.)

In addition to choosing not to limit vegetation treatment activities to areas within the WUI and to places outside the WUI in which fire breaks could be created, the Board also chooses not to forego prescribed burning as a vegetation treatment strategy in chaparral and coastal sage scrub habitat because of the benefits of prescribed burning compared with other treatment strategies. As the PEIR, in discussing Impact BIO-1, explains, the objective of the ecological restoration treatment type is to restore degraded, damaged, or destroyed ecosystems and habitats in fire-adapted vegetation types by returning them to their natural fire regime and returning vegetation in Condition Classes 2 and 3 to Condition Class 1. Accordingly, Mitigation Measure BIO-3a calls for the use of 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). The purpose of aligning prescribed burning with scientific information in reference resources is to eliminate or substantially reduce the risks of degrading habitat function.

The PEIR’s discussion under Impact BIO-3 (regarding chaparral and coastal sage scrub) acknowledges that shortened fire return intervals have been identified as a primary driver of type conversion from chaparral and coastal sage scrub vegetation types to vegetation types dominated by nonnative herbaceous vegetation in southern California (Syphard et al. 2019; Cox et al. 2014; Talluto and Suding 2008; Underwood et al. 2018). Even though chaparral vegetation is fire adapted, and some chaparral species are even fire dependent (e.g., have seeds that are stimulated to germinate by fire), most chaparral types require a minimum of 10 years to recover from fire and chaparral types dominated by obligate seeder shrubs that are fire stimulated generally require a minimum of 15 years to accumulate enough seed in the soil seedbank to recover (Syphard et al. 2019). Chaparral vegetation types that are characterized by facultative seeders (i.e., regenerate by resprouting and from seed) are more resilient to fire than those characterized primarily by obligate seeders, but these, too, can be degraded by repeated short-interval fires. Therefore, vegetation treatment projects implemented under the CalVTP, including prescribed burning, could potentially result in type conversion of chaparral vegetation if the treatment does not replicate the natural fire regime of the vegetation type present. Implementation of SPR BIO-5, however, would avoid environmental effects of type conversion of chaparral and coastal sage scrub by designing treatment projects to replicate the natural fire regime, return the vegetation type to its natural condition class, and maintain or improve the natural habitat function of those alliances. Environmental effects of type conversion considered in the PEIR relate to whether a substantial reduction in the function of affected habitats would occur.

Pursuant to SPR BIO-5, the project proponent will design treatment projects to avoid type conversion where native coastal sage scrub and chaparral are present. For the PEIR, type conversion is considered in terms of habitat function, which is defined as the arrangement and capability of habitat features to provide refuge, food source, and reproduction habitat to plants and animals, and thereby contribute to the conservation of biological and genetic diversity and evolutionary processes (de Groot et al. 2002). Some modification of habitat characteristics may occur without type conversion, provided habitat function is maintained (i.e., the location, essential habitat features, and species supported are not substantially changed). In short, the PEIR includes SPRs and mitigation measures that will avoid type conversion while allowing Cal Fire and other agencies to rely on prescribed burns as an important treatment technique in chaparral and coastal sage scrub habibat.

For all of these reasons and any of them individually, the Board rejects Alternative C as infeasible.

### Alternative D: No Prescribed Burning Treatments

(Final PEIR, Vol. II, Chapter 6, § 6.2.5.)

Similar to the CalVTP, Alternative D would seek to treat approximately 250,000 acres per year with a combination of WUI fuel reduction, fuel break, and ecological restoration treatment types across the entire 20.3 million-acre treatable landscape. However, Alternative D would not include the use of prescribed burning as a treatment activity. This alternative is intended to avoid air quality impacts or other effects that could result from prescribed burning.

Alternative D would include the same treatment types as the CalVTP except for prescribed burning. It would include treatments in all fuel types (i.e., tree, shrub, and grass). To achieve the target of 250,000 acres per year, the proportion of other treatment types would increase substantially in comparison to the CalVTP. To feasibly achieve the treatment target, it is anticipated that the extent of all other treatment activities, and in particular mechanical treatments, would increase. Under this alternative, the estimated distribution of each treatment activity would be:

* 20 percent manual treatment (approximately 50,000 acres),
* 50 percent mechanical treatments (approximately 125,000 acres),
* 15 percent herbicide treatments (approximately 37,200 acres), and
* 15 percent prescribed herbivory (approximately 37,200 acres).

As with the CalVTP, the treatment activity or combination of activities for a specific treatment site would be selected based on the site-specific characteristics and objectives of the treatment site. Because fewer types of treatment activities would be available to achieve a substantial increase in the pace and scale of treatments, it would likely take longer to “ramp up” from current treatment levels to approximately 250,000 acres than under the CalVTP.

#### Potential impacts of alternative D

Alternative D would eliminate two significant and unavoidable impacts associated with air quality because it would not result in emissions from prescribed burning. It would also result in less severe impacts associated with GHG emissions. However, Alternative D would result in greater impacts associated with energy resources; hazardous materials; public health and safety; noise; transportation; public services, utilities, and service systems; and wildfire risk.

##### Aesthetics & Visual Resources

Under Alternative D, there would be no visual effects related to prescribed burning, but more visual effects related to other treatment activities, resulting in similar effects overall. As with the CalVTP, the visual effects of implementing treatments would be short-term, temporary, and would implement SPR AES-2 would minimize visual impacts from the presence of treatment equipment. Like the CalVTP, the long-term effects of most treatments would be visible, but 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. Alternative D would include non-shaded fuel break treatments, which could result in a long-term adverse change in the landscape by resulting in a contrasting linear element in an otherwise natural environment. This would result in the same significant and unavoidable impact as the CalVTP. (*Same significant and unavoidable impact*)

##### Air Quality

Alternative D would avoid two significant and unavoidable impacts of the CalVTP and would result in one of the same significant and unavoidable air quality impacts as the CalVTP. Alternative D would also result in a significant and unavoidable impact because it would generate emissions of criteria air pollutants and precursors during treatment activities that would exceed CAAQS or NAAQS. However, this impact, while significant and unavoidable, would be less than under the CalVTP. That is because under the CalVTP, treatment activity–related emissions could result in, or contribute to, localized exceedances of NAAQS and CAAQS for CO, PM10, and PM2.5 from fugitive dust and smoke from prescribed burns, but under Alternative D this impact would only occur from fugitive dust. Because Alternative D does not include prescribed burning, it would avoid two significant and unavoidable impacts of the CalVTP related to the short-term exposure of people to concentrations of TACs associated with an acute health risk, and objectionable odors from smoke during prescribed burning. Other impacts related to diesel particulate matter, fugitive dust containing naturally occurring asbestos, and objectionable odors from diesel exhaust would be less than significant, similar to the CalVTP. Overall, the air quality effects of the Alternative D would be less than the CalVTP and two of the three significant and unavoidable impacts would be avoided. (*Avoids two of the three significant and unavoidable impacts*)

##### Archaeological, Historical, & Tribal Cultural Resources

The effects of Alternative D on archeological, historic, and TCRs would be similar to the CalVTP. As with the CalVTP, implementation of SPRs would avoid any substantial adverse change to any built historical resources and TCRs, and compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 would avoid disturbance of human remains. Despite implementation of SPRs, unknown unique archaeological resources or subsurface historical resources could be inadvertently damaged during treatment activities under this alternative. This would result in the same significant and unavoidable impact as the CalVTP. (*Same significant and unavoidable impact*)

Biological Resources

Alternative D would result in similar effects on biological resources as the proposed program, and the same significant and unavoidable impact to special-status bumblebees. This alternative would avoid effects associated with prescribed burning, but it would increase the amount of other treatment activities, which would result in a similar effect as the proposed program. As with the proposed program, treatment activities under this alternative could inadvertently damage or destroy special-status plants, fish, wildlife, and their habitat. Alternative D would implement the same mitigation measures as the proposed program, which would minimize or avoid potentially significant impacts on special-status plants and wildlife. However, treatments implemented under this alternative would encounter the same difficulty as the Proposed Program with effectively mitigating impacts to overwintering and nesting special-status bumblebees and this impact would be significant and unavoidable. Adverse long-term effects from treatments under this alternative would be similar to the proposed program and any long-term benefits related to ecological restoration would not be realized to the same extent (e.g., to as many species and vegetation communities) as the proposed program because treatments would be concentrated in a smaller geographic area. Like the proposed program, Alternative D would implement SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-7, BIO-8, and HYD-4 to identify and protect sensitive natural communities and habitats, however treatment activities could 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 ecological function of sensitive natural communities and habitats. Alternative D would avoid the potential for type conversion due to prescribed burning because it would not include prescribed burning. The potential for type conversion could still occur through other intensive treatment activities, and Alternative D would implement the applicable elements of Mitigation Measures BIO-3a through c, which would reduce effects on sensitive natural communities to a less-than-significant level. Alternative D would also result in the same significant effects related to state or federally protected wetlands, movement corridors, and nurseries; and would implement the same mitigation measures to reduce these effects to less than significant. Alternative D would also result in the same less-than-significant effect related to common nesting birds; and, like the proposed program, would have no impact related to conflicts with local policies, ordinances, and plans. Overall, Alternative D would result in no impacts associated with prescribed burning, but greater impacts associated with all other treatment activities. While impact mechanisms would vary from the proposed program, the effects would be generally similar.

##### Greenhouse Gas Emissions

Alternative D would result in the same significant and unavoidable impact as the CalVTP related to GHG emissions from treatment operations, but less GHG emissions overall. It would include GHG emission-generating treatment activities across the same number of acres as the CalVTP. Alternative D would produce less GHG emissions from prescribed burning but more GHG emissions from other treatment activities, including mechanical treatments. As shown in Table 3.8-3 in Section 3.8, “Greenhouse Gas Emissions,” prescribed burning is the most GHG-intensive treatment method. Based on the per acre estimates of GHG emissions in Table 3.8-3, Alternative D would result in approximately 3,960 less MMTCO2e annually than the proposed action. However, without prescribed burning, Alternative D would likely result in more hauling of material off-site and associated GHG emissions, which are not accounted for in Table 3.8-3. GHG emissions from treatment activities and haul trips, while less than the CalVTP, would nonetheless result in a significant and unavoidable contribution to climate change. As with the CalVTP, a purpose of Alternative D is to reduce wildfire risk, which would reduce GHG emissions and potentially increase carbon sequestration over the long-term. Alternative D would result in similar long-term GHG emission reductions and increased carbon sequestration as the CalVTP, because it would include the same treatment types (i.e., WUI fuel reduction, fuel breaks, and ecosystem restoration) across the same number of acres. However, it would take longer to realize these GHG emission reductions due to the longer time period before the annual treatment target of 250,000 acres could be reached without the use of prescribed burning. This alternative would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. (*Same significant and unavoidable impact*)

##### Transportation

The transportation effects of Alternative D would be greater than the CalVTP. Alternative D would not include prescribed burning to remove biomass from treatment areas. As a result, a greater proportion of biomass would need to be transported off site resulting in additional vehicle use, including vehicle miles traveled. Like the CalVTP, traffic operations during vegetation treatments would be temporary and localized. Alternative D would implement SPRs that require consistency with local traffic operations policies and standards to the extent the project is subject to them, and require that a TMP be prepared to manage and minimize potential temporary traffic operations effects resulting from individual vegetation treatment projects. (*Same significant and unavoidable impact)*

##### Public Services, Utilities, and Service Systems

Alternative D would have the same significant and unavoidable impact as the CalVTP and this impact would be greater than under the CalVTP. Because Alternative D would not include the use of prescribed burning to dispose of biomass, it would result in a greater increase in the volume of solid organic waste transported offsite to existing biomass power plants, wood product processing facilities, and/or composting facilities for processing than the CalVTP. This could exceed the capacity of local solid waste infrastructure to a greater extent than the CalVTP. As with the CalVTP, Alternative D would comply with federal, State, and local management and reduction goals, statutes, and regulations related to solid waste; and would not discernably affect the availability of water supply. (*Same significant and unavoidable impact)*

#### feasibility of alternative D

Alternative D would achieve four of the five objectives of the CalVTP to some degree.

Objective 1: Alternative D would achieve Objective 1 to a similar degree as the CalVTP because it would increase the pace and scale of treatments that manage the amount and continuity of wildland fire fuels through WUI, fuel break, and ecological restoration treatment activities.

Objective 2: Alternative D would achieve Objective 2 to the same degree as the CalVTP by providing a streamlined environmental review approach to increase the pace and scale of vegetation treatments.

Objective 3: Alternative D would not achieve Objective 3. It would not increase the use of prescribed burning as a vegetation treatment tool and therefore would be inconsistent with the provisions of Senate Bill 1260, Statutes of 2018 and PRC Section 4483(a).

Objective 4: Alternative D would achieve Objective 4 to a similar degree as the CalVTP. Implementation of Alternative D would result in less GHG emissions from treatment activities because it would not include prescribed burning, which results in greater GHG emissions than other treatment activities.

Objective 5: Alternative D would not achieve Objective 5 because it would not include the application of prescribed burning, and ecological restoration projects would include mechanical, manual, or other treatment activities which would not mimic the effects of a natural fire regime because it would not reintroduce fire.

Alternative D would seek to treat 250,000 acres per year within the approximately 20.3 million-acre treatable landscape. This alternative could be substantially more difficult to implement than the CalVTP because it would limit the use of prescribed burning, which is considered the primary mechanism for achieving the increase in pace and scale of treatments and would require a substantial increase in the pace and scale of other treatment activities.

Alternative D may also result in greater health impacts due to toxic smoke from wildfires. Even short-term exposure (over a few days) to wildfire smoke can result in an increased risk of respiratory illnesses, cardiovascular events, and even premature death. (U.S. EPA. (2009) Integrated Science Assessment (ISA) for Particulate Matter (Final Report, Dec 2009), EPA/600/R-08/139F, 2009; <https://www3.epa.gov/airnow/wildfire-smoke/wildfire-smoke-guide-revised-2019.pdf>.) Prescribed fires are designed and implemented to avoid or minimize smoke impacts, while wildfires burn under uncontrolled and unplanned circumstances. There is little ability for firefighters to manage the direction of smoke from a wildfire, and an uncontrolled wildfire may produce smoke with greater concentrations of toxic materials if it burns through man-made communities. (<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/em9203.pdf>) Therefore, without the use of prescribed fire to mimic natural fire regimes, a greater number of wildfires may result, with two-fold impacts. The wildfires could result in greater impacts to air quality and human health, and greater impacts to biological resources, water and soil quality, and other ecological impacts.

In enacting SB 1260 in 2018, the Legislature made the following findings, among others, regarding the benefits of prescribed burning, including the fact that it is typically the most cost-effective vegetation treatment strategy:

(a) For millennia, fire has shaped and renewed the ecosystems of California’s forest lands. In many parts of the state, historical fire regimes were frequent, with fires occurring as often as every five to 15 years. Some of these fires were naturally ignited by lightning, but fire was also an important tool for Native Americans, who used it to promote the growth of certain plants they relied on for food, medicine, and materials to make baskets, string, and shelter, and which limited the build-up of fuels in forest lands.

(b) For more than a century, states and the federal government have adopted fire suppression policies that have resulted in high fuel accumulations and significant ecological impacts on forest lands. This has been reflected in the increasingly severe fire seasons in recent years with more acres burned at high intensity, increased numbers of large-scale catastrophic fires, significant carbon dioxide and other emissions, problematic and dangerous containment and suppression efforts, increased financial costs, and reductions in resiliency and biodiversity of California’s fire-adapted ecosystems. In addition, implementation of fire suppression policies has impacted tribal communities throughout the state, and continues to threaten cultural resources, practices, ceremonies, and cultural identity.

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(d) Many states and the federal government have been taking measures to increase the use of prescribed burning as a vegetation management tool to reduce the naturally occurring buildup of vegetative fuels on forest lands, thereby reducing the risk and severity of wildfires and lessening the loss of life and property. The United States Fish and Wildlife Service, Bureau of Indian Affairs, National Park Service, United States Forest Service, United States Bureau of Land Management, and United States Fire Administration are part of an interagency strategy that has adopted direction and guidance for prescribed burn planning and implementation. These agencies have created a formal prescribed fire plan template as part of this effort. Moreover, several states have laws that promote prescribed burning, and approximately one-half of the states in the country have prescribed fire councils.

(e) *Prescribed burning is recognized as an important tool in the Department of Forestry and Fire Protection’s 2010 Strategic Fire Plan for California*. This plan includes the objective of increasing “public education and awareness in support of ecologically sensitive and economically efficient vegetation management activities, including prescribed fire, forest thinning and other fuels treatment projects.”

(f) In addition to reducing the frequency and severity of wildfires, *prescribed burning of forest lands helps to prepare sites for replanting and natural seeding, to control insects and diseases, and to increase productivity. It is also an important tool for increasing the fire resilience and heterogeneity of California’s diverse landscapes, and for creating, restoring, and maintaining critical habitats, resources, and ecosystem services. Importantly, prescribed burning also supports public health by reducing emissions associated with more catastrophic wildfires*.

(g) *Prescribed burning is often the most cost-effective, efficient fuel treatment option for forest lands. This is especially true in areas dominated by steep terrain or lack of vehicular access*. In some circumstances, costs may be a challenge when preburn thinning is required to avoid fire escape during burns. In California, some of these costs may be offset through existing timber harvest permit exemptions (for example, the Forest Fire Prevention Pilot Project Exemption) that allow landowners to harvest timber to offset the cost of thinning or burning.

(h) While prescribed burning inherently creates wood smoke, this smoke pales in comparison to the air quality issues created by catastrophic wildfires. Therefore, by reducing the threat of catastrophic wildfires, prescribed burning can have net air quality benefits that are significant to protecting public health.

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(j) Forest ecosystems are crucial for absorbing and storing atmospheric carbon; however, catastrophic wildfires impede the forest’s ability to sequester carbon. Accelerating the pace and scale of prefire treatments, such as prescribed fire, promises to help modify future wildfire impacts and thus protect our forests’ ability to sequester carbon.

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(l) To limit the threat of catastrophic wildfires and to improve forest health, *it is a priority of the state to have an effective prescribed burning program* that is developed collaboratively with federal agencies and crafted by prescribed burning experts at state public universities, public agencies, nonprofit entities, private landowners, and other relevant organizations. It is also a priority of the state that a prescribed burning program should assist forest landowners in exercising due diligence to control prescribed burning so as to prevent fire escape. By promoting due diligence, the state will be protecting the public, reducing the risk of landowner liability, and taking steps to encourage more responsible prescribed burning.

(Emphasis added.)

In considering the feasibility of Alternative D, the Board sees no good reason to forego the use of prescribed burns as the most common technique for vegetation treatment. Prescribed burns are both effective in helping to mimic natural fire regimes and cost-effective compared with other techniques, As is evident from the above-quoted legislative findings supporting the enactment of SB 1260 in 2018, the Legislature favors prescribed burning as the primary means for using vegetation treatment as a key strategy for confronting the State’s wildfire crisis.

For all of these reasons and any of them individually, the Board rejects Alternative D as infeasible.

### Alternative E: No Herbicide Treatments

(Final PEIR, Vol. II, Chapter 6, § 6.2.6.)

Alternative E would seek to treat approximately 250,000 acres per year with a combination of WUI fuel reduction, fuel break, and ecological restoration treatment activities across the entire 20.3 million-acre treatable landscape. However, Alternative E would not allow for the application of herbicides, except for Borax fungicides as described below. This alternative is intended to avoid or substantially lessen impacts related to hazardous materials and other effects that could result from herbicide treatments. This alternative is also responsive to comments provided on the NOP, which recommended avoiding the use of herbicides in vegetation treatments.

Alternative E would include treatments in all fuel types (i.e., tree, shrub, and grass). Except for herbicide treatments, it would include the same treatment types as the CalVTP. To achieve the target of 250,000 acres per year, the proportion of non-herbicide treatment types would increase. To feasibly achieve the treatment target, it is anticipated that the extent of manual treatments and mechanical treatments, would increase. Under this alternative, the estimated distribution of each treatment activity would be:

* 50 percent prescribed burning (approximately 125,000 acres),
* 15 percent manual treatment (approximately 37,500 acres),
* 25 percent mechanical treatments (approximately 62,500 acres), and
* 10 percent prescribed herbivory (approximately 25,000 acres).

As with the CalVTP, the treatment activity or combination of activities for a specific treatment site would be selected based on the site-specific characteristics and objectives of the treatment. This alternative would include the use of Borax fungicides (e.g., Sporax or Cellu-Treat), where applicable as part of manual or mechanical treatments in tree fuel types. These fungicides are often applied to freshly cut stumps to prevent the spread of heterobasidion root disease to nearby healthy trees. No other herbicides or pesticides would be used in vegetation treatments under this alternative. Because fewer types of treatment activities would be available to achieve a substantial increase in the pace and scale of treatments, it would likely take longer to “ramp up” from current treatment levels to approximately 250,000 acres than under the CalVTP.

#### Potential impacts of alternative E

Alternative E would result in less severe impacts associated with hazardous materials, public health and safety because it would avoid risks related to herbicide use and handling. However, Alternative E would result in slightly greater impacts related to geology, soils, paleontology, and mineral resources; GHG emissions; energy resources; noise; transportation, public services, and wildfire risk.

##### Aesthetics & Visual Resources

Under Alternative E, there would be no visual effects related to herbicide application, but more visual effects related to other treatment activities, resulting in similar effects overall. As with the CalVTP, the visual effects of implementing treatments would be short-term, temporary, and would implement SPR AES-2 would minimize visual impacts from the presence of treatment equipment. However, if more frequent retreatment is necessary without the use of herbicide, vehicles could be visible more often. Like the CalVTP, the long-term effects of most treatments would be visible, but 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. Alternative E would include non-shaded fuel break treatments, which could result in a long-term adverse change in the landscape by resulting in a contrasting linear element in an otherwise natural environment. This would result in the same significant and unavoidable impact as the CalVTP. (*Same significant and unavoidable impact*)

##### Air Quality

Alternative E would result in the same significant and unavoidable air quality impacts as the CalVTP and would result in a similar or slightly greater level of air pollutant emissions. Alternative E would include similar treatment activities (with the exception of herbicide application) and would seek to treat the same number of acres each year. Alternative E would result in a significant and unavoidable impact because it would generate emissions of criteria air pollutants and precursors during treatment activities that would exceed CAAQS or NAAQS. These treatment-related emissions could be slightly greater than under the CalVTP if herbicide application is replaced by more emission-intensive activities like mechanical treatments and due to the anticipated need to re-treat areas with greater frequency than under the proposed project. As with the CalVTP, Alternative E would result in significant and unavoidable impacts because prescribed burns could result in objectionable odors and the short-term exposure of people to concentrations of TACs associated with an acute health risk. Other impacts related to diesel particulate matter, fugitive dust containing naturally occurring asbestos, and objectionable odors associated with diesel emissions would be less than significant, like the CalVTP. Overall, the air quality effects of the Alternative C would be similar to, but slightly greater than the CalVTP and the same significant and unavoidable impacts would remain. (*Same significant and unavoidable impacts*)

##### Archaeological, Historical, & Tribal Cultural Resources

The effects of Alternative E on archeological, historic, and TCRs would be similar to the CalVTP. As with the CalVTP, implementation of SPRs would avoid any substantial adverse change to any built historical resources and TCRs, and compliance with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 would avoid disturbance of human remains. Despite implementation of SPRs, unknown unique archaeological resources or subsurface historical resources could be inadvertently damaged during treatment activities. This would result in the same significant and unavoidable impact as the CalVTP (*Same significant and unavoidable impact*)

Biological Resources

Alternative E would result in similar effects on biological resources as the proposed program, including the same significant and unavoidable impact related to special-status bumblebees. This alternative would avoid effects associated with herbicide application, but it would increase the amount of other treatment activities, which would result in a similar effect as the proposed program. As with the proposed program, treatment activities under this alternative could inadvertently damage or destroy special-status plants, fish, wildlife, and their habitat. Alternative E would implement the same mitigation measures as the proposed program, which would minimize or avoid potentially significant impacts on special-status plants and wildlife. However, treatments implemented under this alternative would encounter the same difficulty as the Proposed Program with effectively mitigating impacts to overwintering and nesting special-status bumblebees. Herbicide-related impacts, which are acknowledged as a threat to species survival in the CESA listing petition (Xerces Society et al. 2018), would be eliminated under this alternative, but given the remaining potential for direct mortality and injury of undetected overwintering and nesting bees during other treatment activities, this impact would be significant and unavoidable. Adverse long-term effects from treatments under this alternative would be similar to the proposed program and any long-term benefits related to ecological restoration would not be realized to the same extent (e.g., to as many species and vegetation communities) as the proposed program because treatments would be concentrated in a smaller geographic area. Like the proposed program, Alternative E would implement SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-7, BIO-8, and HYD-4 to identify and protect sensitive natural communities and habitats, however treatment activities could 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 ecological function of sensitive natural communities and habitats. Alternative E would implement Mitigation Measures BIO-3a through c, which would reduce these effects to a less-than-significant level. Alternative E would also result in the same significant effects related to state or federally protected wetlands, movement corridors, and nurseries; and would implement the same mitigation measures to reduce these effects to less than significant. It would also result in the same less-than-significant effect related to common nesting birds; and, like the proposed program, would have no impact related to conflicts with local policies, ordinances, and plans. Overall, Alternative E would avoid impacts associated with herbicide application, but result in more of the other treatment activities and associated impacts. While impact mechanisms would vary from the proposed program, the effects would be generally similar.

##### Greenhouse Gas Emissions

Alternative E would result in the same significant and unavoidable impact as the CalVTP related to GHG emissions from treatment activities. It would include slightly more GHG emissions overall because it would include a greater proportion of manual and mechanical treatments and increased frequency of re-treatment, which produce more GHG emissions than herbicide application (see Table 3.8-3 in Section 3.8, “Greenhouse Gas Emissions”). Based on the per acre estimates of GHG emissions in Table 3.8-3, Alternative E would result in approximately 21,481 more MMTCO2e annually than the proposed action. Alternative E may also require more frequent retreatments of sites, which could result in additional GHG emissions. As with the CalVTP, a purpose of Alternative E is to reduce wildfire risk, which would reduce GHG emissions and potentially increase carbon sequestration over the long-term. Alternative E would result in similar long-term GHG emission reductions and increased carbon sequestration as the CalVTP, because it would include the same treatment types (i.e., WUI fuel reduction, fuel breaks, and ecosystem restoration) across the same number of acres. This would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. (*Same significant and unavoidable impact*)

##### Transportation

The transportation effects of Alternative E would be similar to, but slightly greater than, the CalVTP. This is because Alternative E would seek to treat the same number of acres each year with similar treatment activities but may result in more traffic and VMT associated with more frequent retreatments that would be necessary without the use of herbicide. Like the CalVTP, traffic operations during vegetation treatments would be temporary and localized. Alternative E would implement SPRs that manage and minimize potential hazards because of smoke generated during prescribe burns, require consistency with local traffic operations policies and standards to the extent the project is subject to them, and require that a TMP be prepared to manage and minimize potential temporary traffic operations effects resulting from individual vegetation treatment projects. (Same significant and unavoidable impact)

##### Public Services, Utilities, and Service Systems

Alternative E would have the same significant and unavoidable impact as the CalVTP, and would generally have similar or slightly greater effects on public services, utilities, and service systems. Like the CalVTP, Alternative E would result in an increase in the volume of solid organic waste transported offsite to existing biomass power plants, wood product processing facilities, and/or composting facilities for processing, which could exceed the capacity of local solid waste infrastructure. This increase could be slightly greater if more biomass is disposed of off-site as a result of non-herbicide treatments, or treatment areas must be retreated more frequently. As with the CalVTP, Alternative E would comply with federal, State, and local management and reduction goals, statutes, and regulations related to solid waste; and would not discernably affect the availability of water supply. (*Same significant and unavoidable impact*)

#### feasibility of alternative E

Alternative E would achieve the objectives of the CalVTP to some degree.

Objective 1: Alternative E would achieve Objective 1 to a similar degree as the CalVTP because it would increase the pace and scale of treatments that manage the amount and continuity of wildland fire fuels through WUI, fuel break, and ecological restoration treatment activities.

Objective 2: Alternative E would achieve Objective 2 to the same degree as the CalVTP by providing a streamlined environmental review approach to increase the pace and scale of vegetation treatments.

Objective 3: Alternative E would achieve Objective 3 to a similar degree as the CalVTP because it would increase the use of prescribed burning as a vegetation treatment activity within the treatable landscape.

Objective 4: Alternative E would achieve Objective 4 to a similar degree as the CalVTP because it would include active management of natural and working lands, including ecological restoration treatments, and it would contribute to California’s GHG emission goals.

Objective 5: Alternative E would achieve Objective 5 to a slightly lesser degree than the CalVTP. It would include ecological restoration treatments that would restore fire resiliency in target fire-adapted plant communities by restoring degraded, damaged, or destroyed ecosystems and habitats to conditions associated with a natural fire regime. Alternative E would not include herbicide treatments, which could make some elements of ecological restoration treatments (e.g., invasive weed control) less effective than the CalVTP.

Alternative E would seek to treat 250,000 acres per year within the approximately 20.3 million-acre treatable landscape. This alternative could be more difficult to implement than the CalVTP because it would limit the use of herbicide treatments, which would require an increase in the pace and scale of other treatment activities and possibly increase the need to re-treat a project area in comparison to treatments using herbicides or to re-treat a project area more frequently than if herbicide was used. This may result in additional environmental impacts due to the increased use of heavy mechanical equipment or additional smoke impacts from greater uses of prescribed fire. Because a project area may need to be re-treated more frequently than if herbicides were used, more resources will be devoted to maintenance projects rather than expanding the scope of treatments across the state. This will result in a smaller proportion of the treatable landscape receiving treatment, which would limit the ability of the CalVTP to achieve its objectives.

As described above, Alternative E would not meet the project objectives to the same degree as the CalVTP. Alternative E could also require more physically invasive, expensive, and impacting treatments for subsequent project maintenance than if herbicides were allowed for such treatments, as in the CalVTP.

In light of these considerations, the Board sees no need to reduce the flexibility and effectiveness of the CalVTP by precluding the use of herbicides. Notably, herbicides can be applied safely and without significant environmental effects. As explained in Master Response 9 (Herbicide Use Effects on Public Health, Biological Resources, and Water Quality), herbicides will be applied only on the ground from equipment on vehicles (including all-terrain vehicles or tractors) or by manual application devices. At the direction of the licensed Pest Control Advisor (PCA), herbicides will be applied to green leaves with a backpack hand-applicator or spray bottle, wick (painted or wiped on), or hand wand (sprayed on) or will be hand applied as pellets to the ground surface. Herbicides may also be applied to trees around the circumference of the trunk on the intact bark (basal bark), to cuts in the trunk or stem (frill, or “hack and squirt”), to cut stems and stumps (paint on cut stumps), or injected into the inner bark with a hypo-hatchet. These ground application methods minimize the potential for herbicides to extend beyond the boundary of an application site. No aerial spraying of herbicides will be allowed under the CalVTP.

In addition to the protections afforded by regulatory compliance, several SPRs will be integrated into treatment design to further minimize the potential for significant public health risks (i.e., SPR HAZ-5 through SPR HAZ-9). These SPRs require project proponents to prepare a Spill Prevention and Response Plan prior to beginning herbicide treatment activities to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants (SPR HAZ-5); to 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); to triple-rinse herbicide containers with clean water at an approved site and dispose of rinsate per 3 California Code of Regulations (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); to employ techniques during herbicide application to minimize drift (SPR HAZ-8); and to 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).

Pursuant to these SPRs and existing laws and regulations, pesticides will be applied under the guidance of licensed and certified personnel and according to label requirements, and they will be stored, loaded, and mixed according to specifications that will protect against spills or entry of chemicals into aquatic features; a Spill Prevention and Response Plan will be prepared prior to beginning any herbicide treatment activities to provide protection to on-site workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants; and containers will be cleaned up according to guidelines that prevent contamination. All other applicable laws and regulations pertaining to the use of pesticides and safety standards for employees and the public, as governed by EPA and DPR, will be followed. Furthermore, the potential for herbicide drift will be minimized by prohibiting aerial spraying and limiting ground application when winds exceed 7 miles per hour (mph) and through the use of specific, drift-preventing spray nozzles. Notifying the public prior to and following application of herbicides for a specified period at public areas within 500 feet of an application site will allow the public to avoid areas where treatments are occurring or have recently occurred, if so desired.

Potential impacts on special-status plants and wildlife, habitat, and water quality as a result of herbicide use under the proposed CalVTP are addressed in Impact BIO-1, Impact BIO-2, Impact HAZ-2, and Impact HYD-4 in Chapter 3, “Environmental Setting, Impacts, and Mitigation Measures,” in Volume II of the Final PEIR. Several SPRs and mitigation measures will be implemented to protect special-status plants and wildlife, as well as wetlands and waters, from treatment activities, including the use of herbicides. The relevant SPRs are SPR BIO-1 through SPR BIO-4, SPR BIO-7, SPR BIO-8, and SPR BIO-10. Among other provisions, these SPRs require data review and reconnaissance-level surveys prior to herbicide application to identify and document sensitive resources, such as riparian or other sensitive habitats, sensitive natural communities, wetlands, and wildlife nursery site or habitat, and to assess the suitability of habitat for special-status plant and animal species. If suitable habitat or sensitive biological resources are identified and cannot be avoided, further review and surveys will be required (SPR BIO-1); crew members and contractors will receive training from a qualified RPF or biologist prior to beginning a treatment project, including herbicide application. The training will describe the appropriate work practices necessary to effectively implement the biological SPRs and mitigation measures and to comply with applicable environmental laws and regulations. Additionally, project proponents, in consultation with a qualified Registered Professional Forester (RPF) or qualified biologist, will design treatments in riparian habitats to retain or improve habitat functions by allowing hand application of herbicides only during low-flow periods or when seasonal streams are dry (SPR BIO-4) and will require a qualified RPF or botanist to conduct protocol-level surveys for special-status plant species with the potential to be affected by herbicide application prior to initiation if suitable habitat for special-status plant species is identified through SPR BIO-1 and SPR BIO-7.

In addition, SPR HYD-5 will be implemented to avoid and minimize potential impacts from the use of herbicides on nontarget vegetation, special-status species, and wetlands and waters by requiring that herbicide mixing sites be located in areas devoid of vegetation and away from waterways, using only herbicides labeled for use in aquatic environments in riparian habitats or near waters, prohibiting the application of herbicides within 50 feet of special-status plant species and vernal pools, using dyes to help prevent overspray, prohibiting spray application of herbicides when winds are 7 mph or greater, and prohibiting herbicide use during precipitation events or if precipitation occurred within 24 hours before or is forecast within 24 hours after a scheduled application. Additionally, there is no risk of herbicide drift if stem injection, wicking, or paint-on application is used, especially if sensitive plants are dormant at the time of application. The CalVTP does not include aerial application of herbicides.

In addition to the SPRs, several mitigation measures will be implemented to further avoid and minimize potential impacts on special-status plants, wildlife, habitat, and wetlands and waters from herbicide application (e.g., Mitigation Measures BIO-1a, BIO-1b, BIO-2a, BIO-2b, BIO-2d, BIO-2e, BIO-2f, BIO-2g, and BIO-4). The mitigation measures will avoid the loss of special-status plants by establishing a no-disturbance buffer around the area occupied by special-status plants 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 listed plants (Mitigation Measures BIO-1a and BIO-1b). If special-status wildlife species are observed as a result of SPR BIO-1 or SPR BIO-10, treatments will be prohibited within occupied habitat or outside of the sensitive period of the species’ life history (e.g., breeding or nesting season), and 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 will be sufficient for protection or a larger buffer will be needed. A qualified RPF or qualified biologist will also identify 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; dens; 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 (Mitigation Measures BIO-2a and BIO-2b); require protective measures for specific special-status species and habitat, including valley elderberry longhorn beetle (Mitigation Measure BIO-2d), special-status butterfly host plants (Mitigation Measure BIO-2e), special-status beetle/fly/grasshopper/snail habitat (Mitigation Measure BIO-2f), and special-status bumble bees (Mitigation Measure BIO-2g); and establish a minimum buffer of 25 feet around wetlands where herbicide application will be prohibited.

Implementation of these SPRs and mitigation measures will effectively avoid and minimize potential impacts from herbicide application under the CalVTP on special-status plants and wildlife, habitat (including riparian), and wetlands and waters.

Implementation of the SPRs and mitigation measures described above will avoid and minimize impacts from herbicide application on sensitive biological resources, including wetlands, special-status species, and sensitive habitats, such as riparian areas. Further, the proposed CalVTP limits herbicide use to ground application methods to protect sensitive resources and apply compounds only to targeted vegetation. Implementation of these protections and compliance with the requirements of the herbicide label will effectively control the potential risks to water quality, special-status species, riparian habitats, and other sensitive habitats from herbicide application under the CalVTP. Additional herbicide use limitations, such as additional buffers and exclusion areas or complete or partial prohibition of use, including during maintenance, are not necessary to maintain impacts at or reduce impacts to a less-than-significant level.

In consideration of the target vegetation and the presence of sensitive resources as described above, herbicides will be an effective vegetation treatment method for improving weed control and reducing the need for treatment maintenance and retreatment. Reduced treatment maintenance and retreatment will also reduce associated disturbance-related environmental impacts and the cost of the vegetation treatment projects.

For all of these reasons and any of them individually, the Board rejects Alternative E as infeasible.

# statement of overriding considerations

As set forth in the preceding sections, the Board’s approval of the CalVTP will result in significant adverse environmental effects that cannot be avoided even with the adoption of all feasible mitigation measures, and there are no feasible project alternatives that would mitigate or substantially lessen the impacts. Despite these effects, however, the Board, in accordance with CEQA Guidelines section 15093, chooses to approve the CalVTP because, in its view, the benefits to life, property, and other resources, and the other benefits of the CalVTP, will render the significant effects acceptable.

## significant and unavoidable impacts

The CalVTP will result in the following significant and unavoidable impacts:

* 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 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
* 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 Bumble Bees Either Directly or Through Habitat Modification
* Impact CUL-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources or Subsurface Historical Resources
* 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

## overriding considerations

In the Board’s judgment, the CalVTP and its benefits outweigh its unavoidable significant effects. These Findings are based on substantial evidence in the record. The following statements identify the specific reasons why, in the Board’s judgment, the benefits of the CalVTP as approved outweigh its unavoidable significant effects. Any one of these reasons is sufficient to justify approval of the Program. Thus, even if a court were to conclude that not every reason is supported by substantial evidence, the Board would stand by its determination that each individual reason is sufficient. The substantial evidence supporting the various benefits can be found in the preceding findings, which are incorporated by reference into this section, and the documents found in the Record of Proceedings, which are described and defined in Section 5, above.

* The CalVTP will reduce dire risks to life, property, and natural resources in California.
* The CalVTP reflects the most current and commonly accepted science and conditions in California, and allows for adaptation in response to potential evolution and changes in science and conditions.
* The CalVTP reflects the Board’s and CAL FIRE’s goals. The CalVTP will help the Board and CAL FIRE achieve their central goals for reducing and preventing the impacts of fire in the state, as outlined in the *2018 Strategic Fire Plan for California*. The CalVTP will help to establish a natural environment that is more resilient and built assets that are more resistant to the occurrence and effects of wildland fire.
* The CalVTP will help implement Executive Orders, including:
* EO B-42-17: Governor Brown’s order issued to bolster the state’s response to unprecedented tree die-off through further expediting removal of millions of dead and dying trees across the state;
* EO B-52-18: Governor Brown’s order to improve forest management and restoration, provide regulatory relief, and reduce barriers for prescribed fire; and
* EO N-05-19: Governor Newsom’s order directing CAL FIRE to recommend immediate-, medium-, and long-term actions to help prevent destructive wildfires.
* The Board is required by law to comply with SB 1260, signed into law by Governor Brown in February 2018, which improves California forest management practices to reduce the risk of wildfire in light of the changing climate and includes provisions for the CalVTP PEIR to serve as the programmatic CEQA coverage for prescribed burns within the SRA. The CalVTP will bring the Board into compliance with these requirements.
* The Board is required by law to comply with SB 632, signed into law by Governor Newsom in October 2019, which requires the Board to certify a Final PEIR, pursuant to CEQA, for the vegetation treatment program filed with the State Clearinghouse under Number 2019012052 in January 2019. The CalVTP will bring the Board into compliance with this requirement.
* The CalVTP will help to meet California’s GHG emission goals consistent with the *California Forest Carbon Plan*, *California’s 2017 Climate Change Scoping Plan*, *Fire on the Mountain: Rethinking Forest Management in the Sierra Nevada*, and *California 2030 Natural and Working Lands Climate Change Implementation Plan*.

## conclusion

The Board has balanced the benefits and considerations against the significant unavoidable effects of the CalVTP and has concluded that the impacts are outweighed by the benefits. After balancing environmental costs against Program benefits, the Board has concluded that the benefits to the community will outweigh the environmental risks. The Board believes the CalVTP benefits outlined above override the significant and unavoidable environmental costs associated with the Program.