



Marin Wildfire Prevention Authority  
**San Rafael – San Anselmo Fuel Reduction Zone  
Project**  
**CaIVTP Project Specific Analysis and Addendum**

October 2023





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Project**  
**CalVTP Project Specific Analysis and Addendum**

**October 2023**

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<b>Attachment A</b>	<b>Tree Inventory Report</b>
<b>Attachment B</b>	<b>Standard Project Requirements Checklist and Mitigation Measures Checklist, and Project Design and Implementation Feature and Standard Project Requirement Comparison Table</b>
<b>Attachment C</b>	<b>Archaeological Resources Inventory for the Greater Novato Shaded Fuel Break Project, Marin County, California (Confidential)</b>
<b>Attachment D</b>	<b>Biological Resources Supporting Materials</b>
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<b>Attachment F</b>	<b>Project-Specific CEQA Findings and Statement of Overriding Considerations</b>

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# 1 Introduction

## 1.1 Overview of Proposed Project

The City of San Rafael and Ross Valley Fire Department, in collaboration with the Town of San Anselmo and Marin County Fire, are proposing a Marin Wildfire Prevention Authority (MWPA) Core Project, referred to as the San Rafael – San Anselmo Fuel Reduction Zone project (SRSAFRZ project or proposed project). The goal of the SRSAFRZ project is to create and maintain a fuels reduction and forest health restoration zone around the communities in the greater San Anselmo and San Rafael area to reduce wildfire hazards. The proposed project would involve conducting vegetation management activities within the 159-acre overall area. The project region is shown in Figure 1 and the project area is shown in Figure 2, below.

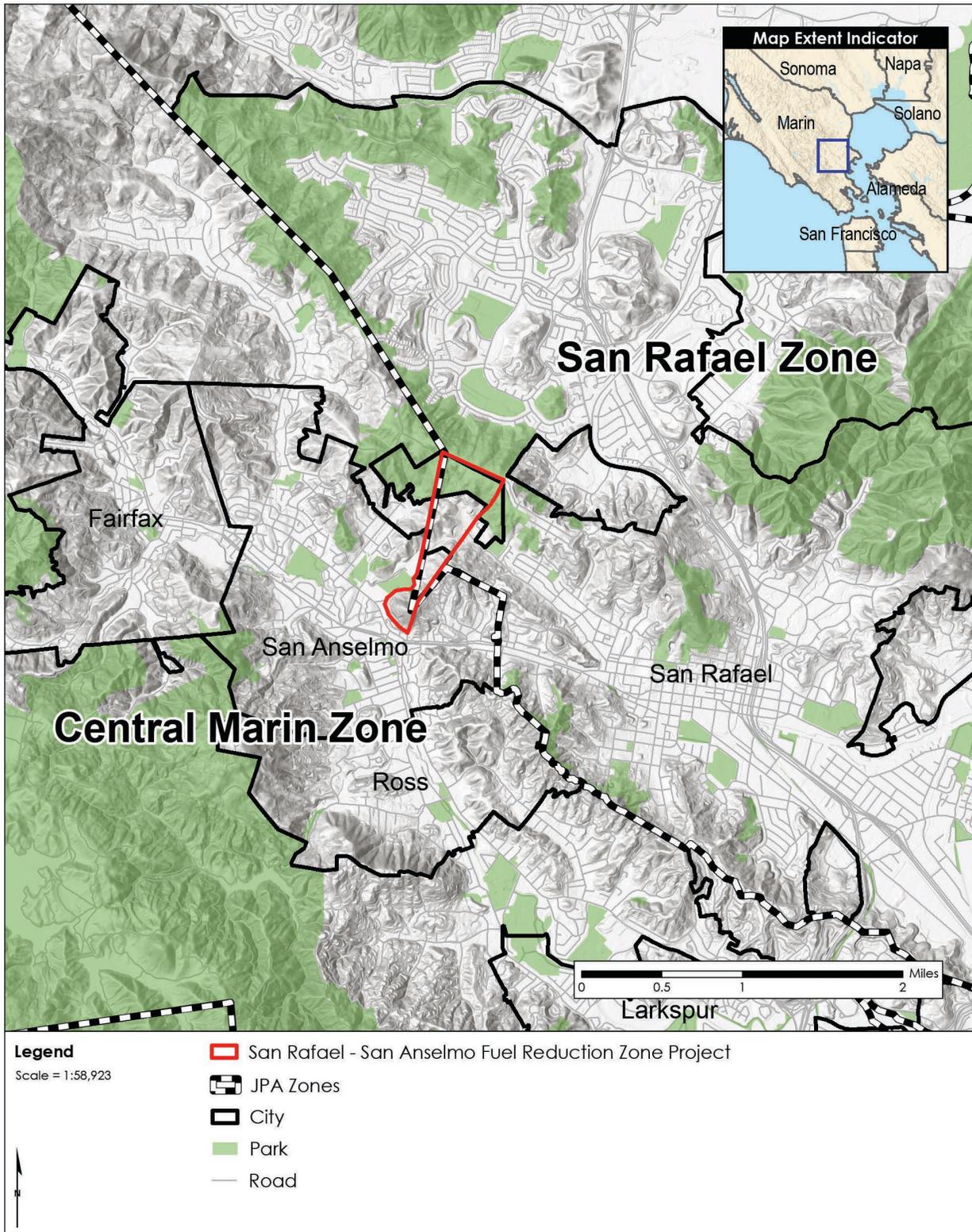
Of the total 159-acre SRSAFRZ project area, 68 acres fall within the State Responsibility Area (SRA), with 91 acres contained within the Local Responsibility Area (LRA). The LRA portion of the project area comprises the same vegetation community types as, and is contiguous with, the SRA portions. The SRSAFRZ project is serviced by the San Rafael Fire Department, Marin County Fire Department, and Ross Valley Fire Department. Figure 3 depicts the underlying landownership across the SRSAFRZ project.

## 1.2 California Environmental Quality Act

The MWPA has evaluated the proposed project for California Environmental Quality Act (CEQA) compliance as constituting later activities covered by CAL FIRE's California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (PEIR) using the Project-Specific Analysis (PSA) checklist herein. For the purposes of implementing the CalVTP, the MWPA is considered the project proponent as it would provide the funding for the proposed project and is serving as the CEQA lead agency. The San Rafael Fire Department and Ross Valley Fire Department would jointly manage the implementation of the proposed project. Approximately 29.5 percent of the proposed project falls within Marin County Open Space District (MCOSD) lands. MCOSD, Ross Valley Fire Department, and San Rafael Fire District are, therefore, responsible agencies under CEQA.

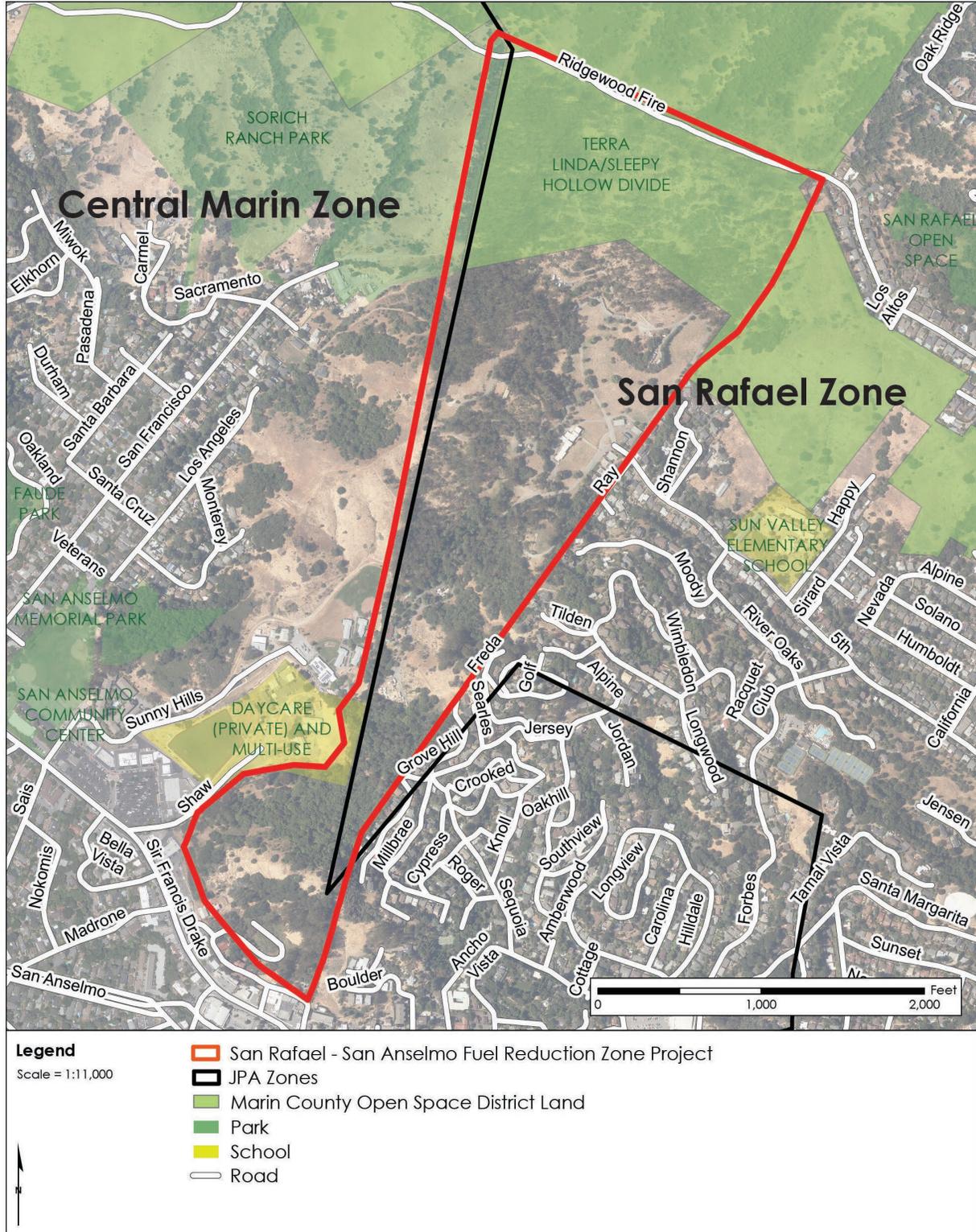
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Figure 1 Proposed Project Region



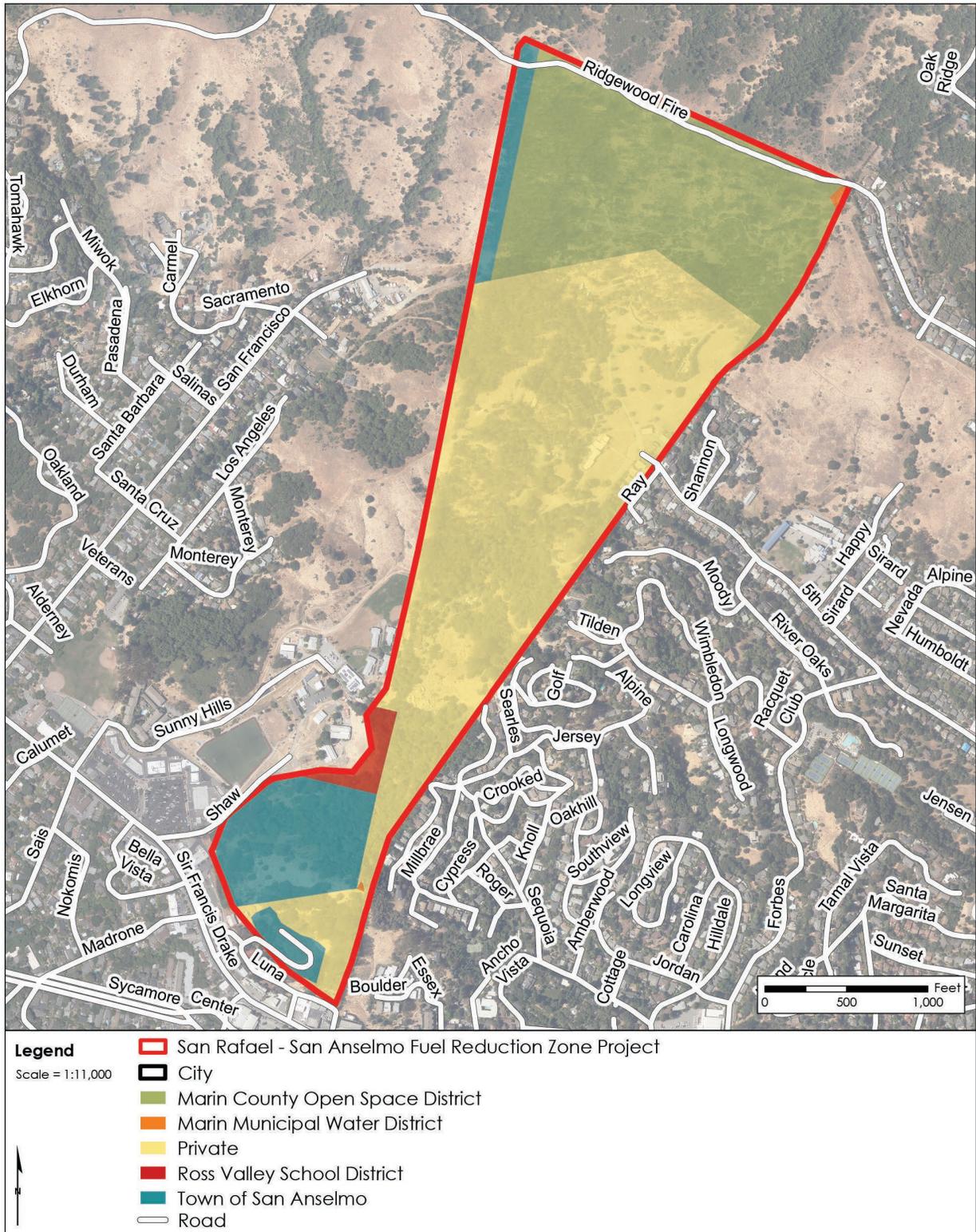
# 1 INTRODUCTION

**Figure 2 Overall Proposed Project**



# 1 INTRODUCTION

**Figure 3 Land Management in the Area of the Proposed Project**



## 1 INTRODUCTION

Consistent with CEQA Guidelines (Title 14 division 6 chapter 3 of the California Code of Regulations) section 15168(c)(2), if the potential environmental impacts of a proposed vegetation treatment project are determined to be covered by the environmental impacts analyzed in the PEIR, the project may be approved using a finding that the project is within the scope of the PEIR. Such a finding would constitute CEQA compliance under the PEIR. The PEIR identified the range of environmental impacts associated with vegetation treatment projects and required implementation of standard project requirements (SPRs) and mitigation measures (MMs) to address and minimize these impacts. In accordance with the PEIR, all relevant SPRs and MMs would be incorporated into the proposed project. Under CEQA, no additional review is required for a project that is consistent with the PEIR.

The CalVTP identifies the portions of California where vegetation conditions are suitable for treatments as the “treatable landscape.” Within the SRSFRZ project area, 64 acres are within the treatable landscape and 95 acres are outside of the modeled treatable landscape. However, under the CalVTP, areas outside the treatable landscape can be included in the PEIR through an addendum if the types of vegetation are covered already, the types of treatment methods are covered, and no new or substantially greater impacts would occur. This document, therefore, also serves as an addendum to the CalVTP PEIR for the inclusion of the additional 95 acres outside of the modeled treatable landscape.

According to Public Resources Code (PRC) section 4291, private homeowners are required to maintain defensible space of 100 feet around structures but not beyond the property line unless a greater distance or fuel modification beyond the property line is required by regulation. Defensible space treatment activities conducted by private homeowners with private funding in accordance with state and local regulations does not constitute a project under CEQA (CEQA Guidelines sections 15377–15378) and, thus, private homeowners are not required to comply with CEQA. This analysis affords the opportunity for public funds to be used to implement defensible space on private property within 100 feet of structures; however, in general, these treatments would be conducted by the individual homeowners, who would not be required to comply with this PSA and addendum.

Implementation of the proposed project would be partially or fully funded by Measure C funds administered by the MWPA over the coming years. Grant funding for implementation of the proposed project is being considered and, if sought and awarded, would be used to implement all or portions of the proposed project over the coming years.

### **1.3 Purpose of the Project-Specific Analysis and Addendum**

This document serves as a PSA and addendum to evaluate whether the proposed project is within the scope of the CalVTP PEIR. Proposed treatment projects qualifying as within the scope of the PEIR must be consistent with the treatment types and treatment activities covered in the CalVTP and the geographic extent of the CalVTP treatable landscape.

## 1 INTRODUCTION

As further discussed in Chapter 2: Project Description, all proposed treatment types and treatment activities are consistent with those described in the CalVTP PEIR. Some biomass processing technologies were not analyzed in the CalVTP PEIR but were analyzed in a CalVTP technical paper, which showed that the environmental analysis in the PEIR for these biomass processing technologies is appropriate. The proposed project includes treatment areas that fall within the CalVTP treatable landscape as well as outside of it due to the degree of mapping resolution that resulted from the method by which the CalVTP treatable landscape was digitally modeled. These areas falling outside of the CalVTP treatable landscape are dispersed throughout treatment area sections, as shown in Figure 4. Since the areas of the project area outside of the CalVTP treatable landscape have essentially the same, or substantially similar, landscape conditions and vegetation cover as the adjacent areas within the treatable landscape, the environmental analysis in the PEIR is applicable.

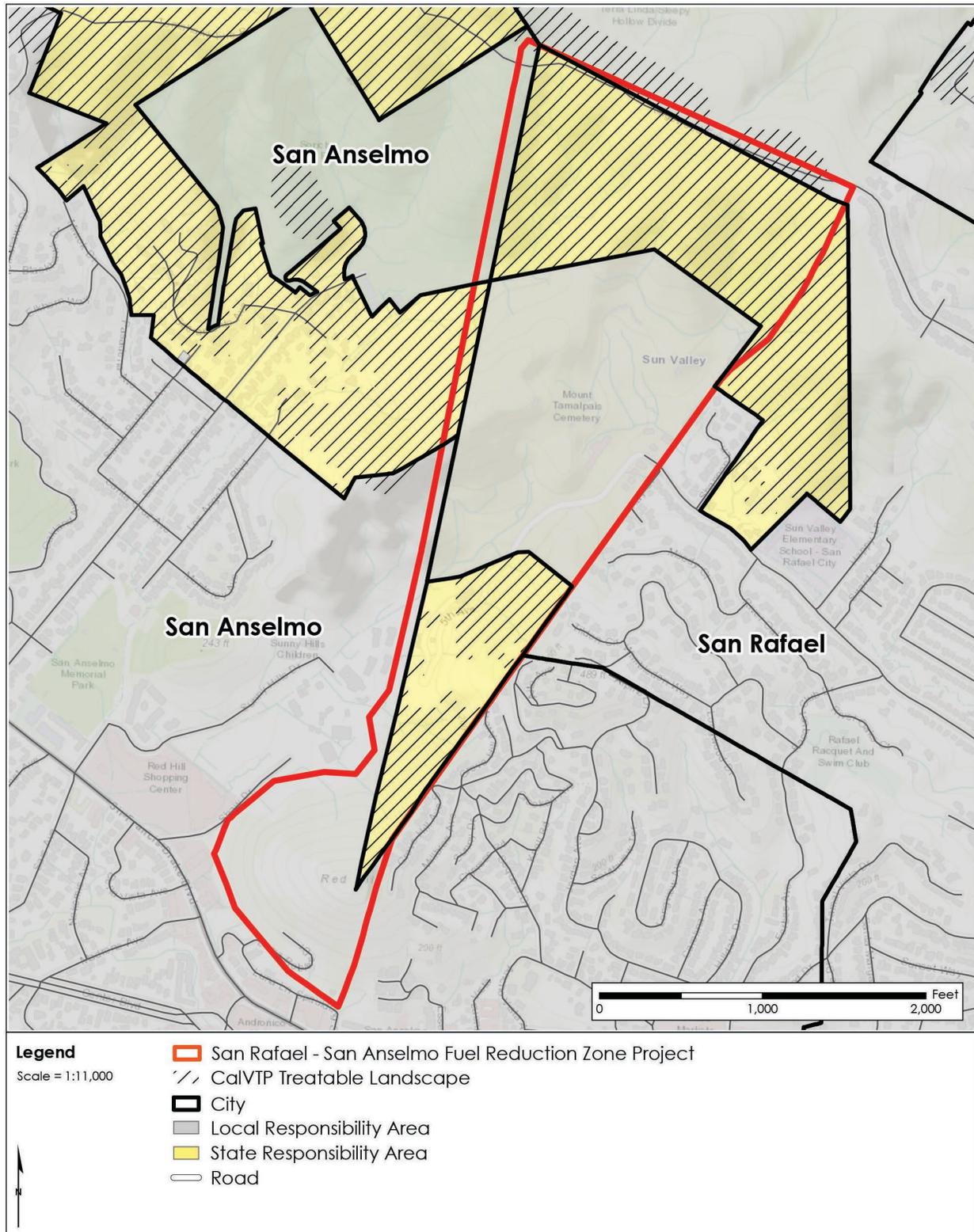
Consistent with PRC 21166 and CEQA Guidelines sections 15162, 15163, 15164, and 15168, an addendum to an EIR is appropriate where a previously certified EIR has been prepared and some changes or revisions to the project are proposed or where the circumstances surrounding the project have changed but none of the changes or revisions result in new or substantially more severe significant environmental impacts. For the proposed project, the proposal to treat areas outside of the CalVTP treatable landscape represents a minor revision or change to the project (i.e., the CalVTP treatable landscape). The PSA checklist (see Chapter 3: The California Vegetation Treatment Program Environmental Checklist) includes the criteria to support an addendum to the CalVTP PEIR for the inclusion of proposed treatment areas outside the CalVTP treatable landscape.

The PSA checklist evaluates each environmental resource topic in terms of whether the proposed project, including the “changed condition” of additional and expanded geographic area, would result in significant impacts that would be substantially more severe than those covered in the PEIR and/or would result in any new impacts that were not covered in the PEIR.

This document serves as both a PSA and an addendum to the CalVTP PEIR for analysis under CEQA for the proposed project. The project-specific mitigation monitoring and reporting program, which identifies the CalVTP SPRs and MMs applicable to the proposed project, is included as Attachment F. The SPRs identified in Attachment F have been incorporated into the proposed vegetation treatments as a standard part of treatment design and implementation.

# 1 INTRODUCTION

**Figure 4 Proposed Project Within and Outside the CalVTP Modeled Treatable Landscape**



Source: (CAL FIRE 2019)

## 2 Project Description

### 2.1 Project Location

The proposed project would involve reduction of fuel loads around communities within unincorporated Marin County, the town of San Anselmo, and the city of San Rafael, bordering open spaces and within the *wildland urban interface* (WUI). The SRSAFRZ project is within land owned and/or managed by local jurisdictions, MCOSD, MMWD, and private landowners, as shown in Figure 3 (page 1-4) and listed in Table 2-1. Wildfire hazard risk is high in the areas of the proposed project due to the spread of exotic, invasive fire-hazardous vegetation, decades of dead vegetation accumulation, and over a hundred years of fire suppression as well as increased risk of anthropogenic ignition due to the interface with urban development. The proposed project area is shown in Figure 5 (page 2-4).

**Table 2-1 Project Land Ownership and Size**

Land manager	Acres
Marin County Open Space District	47.4
Marin Municipal Water District	0.3
Ross Valley School District	2.0
Town of San Anselmo	19.4
Private/other	90.1
<b>Private</b>	<b>90.1</b>
<b>Public</b>	<b>69.1</b>
<b>SRSAFRZ Total</b>	<b>159.2</b>

### 2.2 Description of Project

#### 2.2.1 Purpose

The purpose of the project is to create and maintain a reduced-fuel and forest-health-restoration zone between the communities of San Rafael and San Anselmo to reduce wildfire hazards, including wildfire intensity and rate of spread, to restore native habitat, and to provide strategic locations for firefighters and emergency personnel to fight a wildfire in the event of ignition. As described in the CalVTP EIR, the focus of WUI fuels reduction treatments is to strategically reduce vegetation density and remove fuel to directly protect communities and assets at risk

## 2 PROJECT DESCRIPTION

from potential damage from non-wind-driven wildfires originating in the adjacent wildlands as well as to protect the wildlands from fires starting in or near development.

To achieve this goal, the project would thin smaller eucalyptus and retain a mosaic of oak woodland, grassland, and other common native tree and shrub species. The larger remaining eucalyptus trees would be spaced to reduce the likelihood of crown fire and maintained to reduce the likelihood of surface fire reaching the crowns, thus reducing their contribution to wildfire hazards to neighboring and downwind communities. Additionally, the proposed project would reduce excess and ladder fuels within defensible space areas adjacent structures and restore forest health by enhancing native, fire-resilient plant communities, primarily through invasive species removal, removing lower tree limbs, thinning small trees and shrubs, and removing dead and down woody debris.

### Tree Inventory

To define the proposed project, fire agencies in the project area worked with a natural resource planning and management consultant to complete a tree inventory of the area. Tree inventory surveys were conducted between April 10 and 11, 2023 on MCOSD and non-MCOSD lands within the project area (Jacobszoon & Associates, Inc. 2023). The inventory was stratified into four stands: eucalyptus-dominated mixed hardwood forest, very dense eucalyptus-dominated mixed hardwood forest, eucalyptus high density (MCOSD lands), and eucalyptus low density (MCOSD lands). The results of the inventory are presented in Attachment A. The inventory surveys were used to develop tree removal estimates for the project. Table 2-2, below, lists estimates for the number of eucalyptus trees that would be removed during treatment activities.

**Table 2-2 Project Tree Removal Estimates by Stand and Diameter at Breast Height (dbh)**

Tree stand	1–5 inches dbh	6–10 inches dbh	11–15 inches dbh
MCOSD Eucalyptus high density (MCOSD EU)	2,671	2,043	597
MCOSD Eucalyptus low density (MCOSD MH)	1,400	933	280
Non-MCOSD eucalyptus-dominated mixed-hardwood forest (E1)	1,886	943	409
Non-MCOSD very dense eucalyptus-dominated mixed-hardwood forest (E2)	3,921	1,368	419
<b>Total</b>	<b>9,878</b>	<b>5,287</b>	<b>1,705</b>

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### 2.2.2 Proposed CalVTP Treatments

Using the data provided in the tree inventory, the proposed project area has been broken into discrete treatment areas according to land ownership, eucalyptus and other tree stand density, and defensible space areas. The treatment areas are listed in Table 2-3, below, and shown in Figure 5 (page 2-4), and correspond with Figure 1 of Attachment A. Table 2-4 (page 2-5) lists the vegetation types within the project area, of which approximately 50 percent is non-native eucalyptus forest. Table 2-5 (page 2-3) lists the treatments proposed under the CalVTP PEIR by treatment type, described in Section 2.2.3.

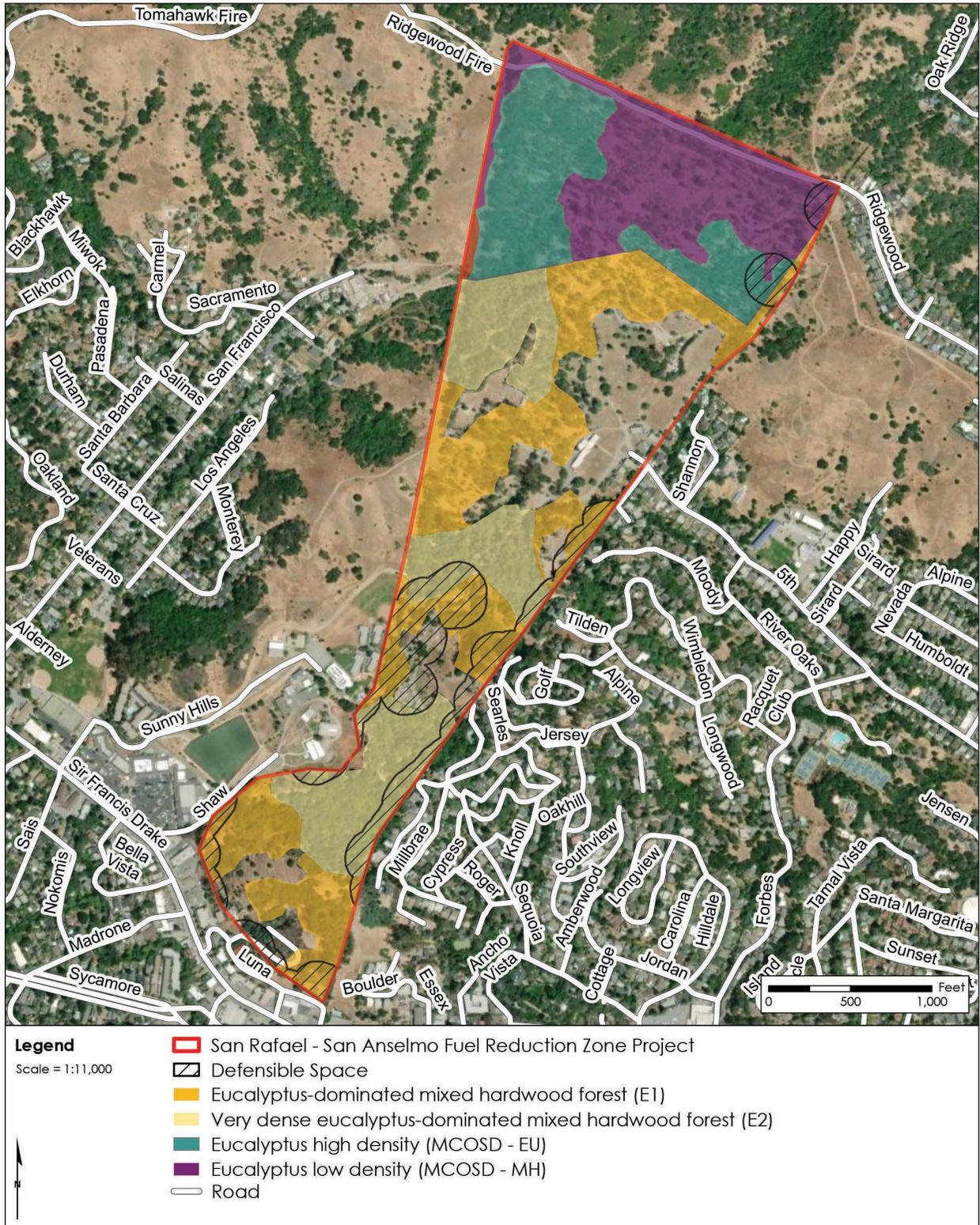
**Table 2-3 Treatment Acres**

Treatment area	Acres <sup>a</sup>
MCOSD Eucalyptus high density (MCOSD EU)	22.5
MCOSD Eucalyptus low density (MCOSD MH)	27.3
Non-MCOSD eucalyptus-dominated mixed-hardwood forest (E1)	44.3
Non-MCOSD very dense eucalyptus-dominated mixed-hardwood forest (E2)	31.4
Defensible space (overlaps with areas of the eucalyptus treatment)	21.9

<sup>a</sup> Acres do not total to 159 due to overlap.

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**Figure 5 Proposed Treatment Areas**



## 2 PROJECT DESCRIPTION

**Table 2-4 Project Vegetation Type**

Vegetation community	Vegetation type	Acres	Percentage
Developed	Developed	19.5	12.2
Forest fragment <sup>a</sup>	Forest fragment	1.0	0.6
Herbaceous	Californian Annual & Perennial Grassland	13.5	8.5
Native forest	<i>Umbellularia californica</i> Alliance	12.3	7.7
Native forest	<i>Sequoia sempervirens</i>	1.2	0.7
Native forest	<i>Evergreen Hardwood (Urban Window)</i>	0.1	0.0
<i>Subtotal Native forest</i>	<i>several</i>	<i>13.6</i>	<i>8.4</i>
Oak forest alliance	<i>Quercus agrifolia</i> Alliance	15.1	9.5
Native shrub	<i>Baccharis pilularis</i> Alliance	13.4	8.4
Non-native forest	<i>Eucalyptus (globulus, camaldulensis)</i> Provisional Semi-Natural Association	78.8	49.5
Non-native forest	<i>Acacia spp. – Grevillea spp. – Leptospermum laevigatum Semi-Natural Alliance</i>	1.4	0.9
<i>Subtotal Non-native forest</i>	<i>several</i>	<i>80.2</i>	<i>50.4</i>
Non-native shrub	<i>Genista monspessulana</i> Semi-Natural Association	1.3	0.8
Shrub fragment	Shrub fragment	1.7	1.1
<b>All communities</b>	<b><i>all vegetation types</i></b>	<b>159.2</b>	<b>100</b>

Notes:

- <sup>a</sup> Vegetation communities with less than 0.1 acre were not included in the table.
- <sup>b</sup> Forests surrounded by non-forest
- <sup>c</sup> Shrub or hardwood habitats within an urban core

**Table 2-5 Proposed CalVTP Wildland Urban Interface Project Initial Treatments**

CalVTP treatment activity	Treatment size (acres) – max	Equipment used for treatments	Timing of initial treatments
Manual treatments	Up to 159	Chainsaws, pole pruners, loppers, and string trimmers	Winter 2023/2024 and ongoing

## 2 PROJECT DESCRIPTION

CalVTP treatment activity	Treatment size (acres) – max	Equipment used for treatments	Timing of initial treatments
Ground-based mechanical treatments	Up to 159	Skid steers or tractors with mounted masticators; chipper; other heavy equipment	Winter 2023/2024 and ongoing
Herbicide	Painted on treatment immediately after cutting eucalyptus.  Targeted spot treatment before, during, or after other treatments within the treatment area, where allowed per local regulation (very limited locations within up to 159 acres)	Herbicide and applicator materials	As needed
Pile burn, air curtain burner, and biochar generation options	As needed with material removed within the entire fuel reduction area (up to 159)	Drip torch; air curtain burner; kiln	As needed
Herbivory	As needed for grass and woody vegetation maintenance post eucalyptus removal on up to 159 acres	Livestock; goats, sheep, cattle, horses	As needed
<b>Total acres</b>	<b>159 acres</b>	<b>N/A</b>	<b>N/A</b>

### 2.2.3 Wildland-Urban Interface Fuel Reduction

#### Overview

The project would involve fuel reduction within areas of open space in the WUI adjacent structures and communities. These areas would be treated to reduce wildland fire risk. Non-native eucalyptus vegetation would be thinned to reduce density and fuel loads in these areas. Understory vegetation would be thinned and trees limbed to reduce ladder fuels. In defensible spaces around structures, vegetation would be thinned to achieve appropriate horizontal and vertical spacing. No new roads or trails would be created during treatment activities. The treatments would be broken into two phases. Refer to the treatment methods and prescriptions by phase for more information.

#### Treatment Methods

Fuel treatment methods vary depending on cover type, condition of vegetation, topography, costs, and efficiency and in conformance with landowner/manager requirements. The primary treatment methods or activities that may be implemented include manual treatments, ground-based mechanical treatment, and targeted herbicide application (CalVTP PEIR Section 2.5.2).

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### **Manual Treatment**

Manual treatments include use of hand tools and hand-operated power tools to cut, clear, girdle, or prune herbaceous woody species and remove dead woody vegetation and low-lying shrubs and brush as well as trees. These treatments are typically used where access for larger equipment is not feasible or not appropriate. Invasive species removal can be performed by hand (or mechanically). Equipment and tools that could be used include chainsaws, pole pruners, loppers, and string trimmers.

### **Ground-based Mechanical Treatment**

Much of the eucalyptus removal work would be done using motorized equipment to remove and transport existing eucalyptus trees and cut, crush/compact, or chop other vegetation. This equipment would generally be used on slopes of up to 50 percent. The equipment and tools that could be used include heavy equipment appropriate for the site, such as skid steers or tractors with mounted masticators, cranes, and light duty tractors. Due to potential tree lean, some trees may need to be removed in sections using a crane. Skid steers and light duty tractors would remove larger-diameter materials from the roads for transport to staging areas. No tilling or discing would occur.

On slopes between 50 percent and 65 percent, the use of heavy equipment would be prohibited where erosion hazards are high or extreme. Heavy equipment would be limited to existing trails or roads. The equipment may need to be driven off road to reach tree removal sites, but new permanent roads would not be created. Cable operations would be permitted on slopes up to 65 percent. Use of heavy equipment on slopes greater than 65 percent would be prohibited.

### **Herbicide Application**

Herbicides would be applied in a targeted manner. Application methods would include painting onto stumps and cut vegetation immediately after cutting and as follow up treatment, as needed, to kill or prevent regrowth of invasive and non-native species, particularly broom and eucalyptus. Foliar application may be used particularly for broom. No broadcast or aerial spraying would occur. The proposed project would use herbicides, along with other methods of invasive species eradication, as part of an integrated pest management approach. Herbicides would only be used as allowable based on local regulations, including the City of San Rafael Integrated Pest Management Plan (IPMP), Town of San Anselmo Integrated Pest Management Program, and provisions in the CalVTP. The herbicides allowed under the CalVTP EIR include the following:

- Borax (tetraborate decahydrate)
- Clopyralid (monoethanolamine salt)
- Glyphosate (isopropylamine salt, potassium salt, dimethylamine salt, and diammonium salt)
- Hexazinone
- Imazapyr (isopropylamine salt)
- Sulfometuron Methyl
- Triclopyr (butoxyethyl ester & triethylamine salt)

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- Nonylphenol 9 Ethoxylates (NP9E)
- Cleantraxx (penoxsulam & oxyfluorfen)
- Velpar (hexazinone)
- Indaziflam

Herbicide application under the CalVTP must comply with the U.S. Environmental Protection Agency (EPA) label directions as well as California Environmental Protection Agency and Department of Pesticide Regulation (DPR) label standards. The application method chosen would depend on the written recommendations of an independent *pest control advisor* (PCA) licensed by DPR for the targeted weed species and characteristics of the site for which the treatment is proposed.

### **Native Plantings**

Native plantings may be implemented in some areas after tree removal as determined by post-treatment inventories. If native plantings occur, specific areas identified within the project site would be replanted with native vegetation. A consideration during planting and subsequent monitoring is that eucalyptus have been studied to have varying degrees of allelopathic effects in which allelochemicals are released from the leaf litter and duff that suppress germination and growth of other plants and greatly reduces native biodiversity. Several studies have shown that unconcentrated fog drip and stemflow from eucalyptus trees inhibit germination of annual grass seedlings and California native plant species (Wolf and DiTomaso 2016; Watson 2000). Other studies have found that the germination, seedling growth, and root length of native plant species are not inhibited by the allelochemical compounds in eucalyptus (Nelson 2016). It is hypothesized that allelopathy by eucalyptus trees may be influenced by rainfall (Lange and Reynolds, n.d.; Watson 2000). Areas of low rainfall are likely to have concentrated allelopathic chemicals in the upper soil layers, which would result in the inhibition of germination and seedling growth. Conversely, winter rainfall would likely leach allelopathic chemicals into the soil profile. This property of eucalyptus can be useful when applied to prohibit regrowth of invasive plants such as broom. If the initial replanting is not successful, additional vegetation would be replanted at the project site based on site monitoring.

### **Prescribed Herbivory**

Prescribed herbivory may be used for maintenance treatments if post-treatment conditions are appropriate. Prescribed herbivory would be used to manage fuel loads after initial treatments, typically in shrubland and forest understory, but in grasslands as well. Livestock would typically be goats and sheep but may include horses and cattle. Prescribed herbivory may require the installation of temporary fencing where natural barriers are not present and of temporary water facilities and other infrastructure (e.g., tanks, corrals, fences) as well as the deployment of guard animals and/or a shepherd.

Goats, and sometimes sheep, are often used for targeted reduction of fine fuels such as grasses and herbaceous vegetation. Goat grazing would involve transporting a herd of goats to the designated prescribed herbivory sites. Site preparation would involve installation of a portable electric fence, powered by a battery charged by a generator or solar panels, to contain the goats

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and a water trough. The herder would determine the area to be grazed based on site conditions; it would typically range from 1 to 2 acres but can be up to 5 acres at one time, for goats, or a larger area (larger than 5 acres) for other types of livestock, such as sheep or cattle.

### **Biomass Disposal**

#### *Overview*

Project debris would be processed through hauling, chipping and hauling, chipping and broadcasting, mulching using a tracked masticator, kiln burning, air curtain burning, pile burning, or the use of a carbonator. The cut vegetation materials may be processed in a variety of ways if off-hauled, including but not limited to use in pyrolysis–biomass conversion or enhanced composting. The specialized biomass-processing technologies (i.e., carbonator, kiln burning, and air curtain burning) were analyzed in a CalVTP technical paper that provided substantial evidence to demonstrate that the specialized technologies addressed herein may be used in the CalVTP process for project approvals because new significant environmental impacts or substantially more severe significant impacts would not occur beyond effects already covered in the CalVTP PEIR (Ascent Environmental 2022).

#### *Chipping*

An *all-terrain vehicle* (ATV) and tracked towable chipper, trailer-mounted chipper, or chipper truck may be used to process cut vegetative materials. The vegetative material would be fed through the chipper and broadcast at treatment areas or hauled away for processing. Chipped material spread on site would be chipped to under 3 inches in size and would be applied no more than 2 to 4 inches in depth to minimize wildfire risk. Vegetative material, if removed, would be hauled to West Marin Compost, Redwood Landfill, or Marin Resource Recovery Center or another appropriate biomass-processing facility or used as appropriate in other areas of Marin County, including the communities of San Anselmo or San Rafael.

#### *Pile Burning<sup>1</sup>*

Cut material may be pile burned, depending upon access and the conditions of the treatment area. Suitable treatment areas are typically flat or gentle slopes and have open areas away from tree canopies and power lines. Areas selected would be those away from waterways. Piles would generally be 4 feet in diameter and 4 feet in height. Multiple piles may be burned on a single day. Pile burning would be conducted in compliance with CAL FIRE and BAAQMD Regulation 5 for open burning and burn day restrictions.

#### *Carbonator*

Carbonators burn vegetative biomass and trap *greenhouse gases* (GHGs) and particulates in the form of biochar. Carbonators can be standard air curtain burners or specialized equipment. The biochar is produced through a couple of additional steps beyond the standard air curtain burner process. The coals and wood chunks are separated from the burner either by hand with

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<sup>1</sup> In the CalVTP PEIR, pile burning is one of the two categories of burning under the treatment activity referred to as “prescribed burning.” Throughout the PSA analysis, the term *pile burning* is used for clarity.

## 2 PROJECT DESCRIPTION

an ash rake or using a mechanical conveyor belt and hydraulic system at the bottom of the equipment and quenched with water either from a hand-held hose or an integrated quenching bin in the equipment. This material is the biochar, which can be redistributed across the landscape. Biochar mimics the soil properties of wildfire-generated charcoal, which can assist in returning the land to a fire-adapted ecosystem (DeLuca, T. H.; Aplet, G. H. 2008; Harvey, A. E.; Larsen, M. J.; Jurgensen, M. F. 1979; Matovic, D. 2011). The carbonator would be staged in flat areas such as parking lots, trails, or roads. The carbonator would typically only be run when a backstock of at least 2 days' worth of debris would be available to burn. While the CalVTP PEIR does not explicitly address the use of carbonators, the methodology falls within and is less impactful than pile burning, which is covered under the CalVTP PEIR. On this account, carbonator is being added as a biomass-processing tool through the addendum.

### *Kiln Burner*

Kilns are simple systems that burn biomass and produce biochar. Kilns typically consist of open-top metal containers in the shape of cylinders, inverted pyramids, or cones. Biomass is placed into the kiln and combusted using a pyrolysis process known as flame carbonization. The process of flame carbonization uses a flame curtain or cap at the top of the kiln to exclude oxygen from the biomass (Ascent Environmental 2022). Biochar is collected at the bottom of the kiln once combustion is complete. The kiln would be typically staged on roads or parking lots. While the CalVTP PEIR does not explicitly address kiln burning, the methodology falls within and is less impactful than pile burning, which is covered under the CalVTP PEIR. On this account, kiln burning is being added as a biomass-processing tool through the addendum.

### *Air Curtain Burning*

Air curtain burning may be used as an alternative to pile burning for sites with higher fuel loading and more woody material. An air curtain burner places a high velocity curtain of air over a defined burn chamber, which would be located in a well-conceived aboveground structure with refractory walls as part of the proposed project. During air curtain burning, the rising particulates or smoke particles (also referred to as *black carbon*) from burning the wood waste hit the curtain of air, are bounced back down, and reburn to the area just below, which is usually the hottest area in the burn box and referred to as the *secondary burn chamber*. The particles remaining that are light enough to penetrate the air curtain and rise outside of it are limited to gaseous emissions consisting mostly of water vapor and (biogenic) carbon dioxide. The result is a much cleaner, nearly smokeless burn as well as a much faster burn as some of the air curtain's volume is decisively directed in the burn chamber, over-oxygenating the fire and thereby accelerating it. The burners would typically be staged on parking lots or roads. The air curtain burner would typically only be run when a backstock of at least 2 days' worth of debris is available to burn. While the CalVTP PEIR does not explicitly address air curtain burning, the methodology falls within and is less impactful than pile burning, which is covered under the CalVTP PEIR. On this account, air curtain burning is being added as a biomass-processing tool through the addendum.

## 2 PROJECT DESCRIPTION

### General Treatment Prescriptions

#### Phase 1 Forest Stand Treatment

Treatments during Phase 1 of the proposed project would target the removal of non-native, primarily eucalyptus, trees on private, Town of San Anselmo, MMWD, and MCOSD lands. Fuels reduction work would include the removal of all non-native stems 10 inches diameter at breast height (dbh) or less and retention of retain native species. Some non-native trees, primarily eucalyptus, greater than 10 inches dbh and less than 15 inches dbh may be removed, depending upon access and ease of removal. Most non-native trees greater than 15 dbh would be retained unless the trees are considered hazardous as identified by an arborist or qualified fire professional. Healthy native trees would be left in place unless removal would be required due to structural or health defects that place infrastructure or lives at risk or should tree densities pose a fire hazard risk. Stumps and root balls would be mostly retained with the exception of cut stumps that pose a hazard or logistical challenge. Cut stumps would be treated with herbicide if regrowth is likely. Understory ladder fuels including non-native, invasive Scotch broom and French broom, along with shrub-like understory tree saplings, may be removed as may hazardous trees (e.g., dead or dying trees) identified by an arborist or qualified fire professional. Understory ladder fuels including non-native and invasive broom, shrubs, and shrub-like understory tree saplings would also be removed in woodland communities. Biomass would be managed through one or more of the techniques listed above.

#### Phase 2 Forest Stand Treatment

Following Phase 1 treatment, an inventory of remaining non-native trees would be conducted. After the inventory is completed, removal of select non-native trees, mostly eucalyptus stems, greater than 10 inches dbh would occur or, in some areas, complete conversion of eucalyptus forest could occur, as appropriate. Treatment prescriptions during Phase 2 would be conducted based upon the inventory data. Smaller units of eucalyptus would be broken up depending on the aspect and slope of the site. Larger stems would remain in place with the exception of trees that pose a significant fire hazard. Cut stumps would generally remain in place with the exception of stumps that pose a significant fire or other hazard. Larger trees would remain in place along the ridgeline with the exception of tree(s) that pose a significant fire hazard or other risk. Larger trees would be maintained by reducing ladder fuels and debris/suckers from around the bases. An assessment would be conducted to determine whether native plantings would be beneficial to achieve the desired outcome or if the remaining native species are growing suitably.

#### Defensible Space Treatments

Defensible space treatments would occur within 100 to 150 feet around structures, as determined by fire professionals and based on site conditions. Treatments could occur during Phase 1 and Phase 2 of the project, as needed. Treatments for defensible space would be conducted using manual and mechanical thinning. Fuels reduction work would include pruning tree branches 8 to 10 feet above ground (not to exceed one-third of the tree's height), removal of dead/down branches and dead standing trees, and the removal of live native trees with a typical diameter up to 8 to 10 inches dbh to achieve horizontal spacing. Smaller, mature

## 2 PROJECT DESCRIPTION

native trees would typically be retained unless the densities pose a fire hazard risk but may be pruned. Understory ladder fuels including non-native, invasive Scotch broom and French broom, along with shrub-like understory tree saplings, would be removed, as may hazardous trees (e.g., dead or dying trees) identified by an arborist or qualified fire professional. Understory ladder fuel including non-native and invasive broom, shrubs, and shrub-like understory tree saplings would also be removed in defensible space areas. The intent of the defensible space treatments would be to minimize ladder fuels and fuel loads and promote native trees. Herbicide spot treatment would be employed to prevent invasive tree and shrub regrowth.

### 2.2.4 Schedule and Duration

Treatments would occur during weekdays between 7:00 am and 5:00 pm. Treatment work on weekends is not anticipated. However, trail and treatment area closures could extend to weekends even if treatment work is not scheduled to occur. Phase 1 treatments would begin in fall/winter 2023 and would be conducted over several years, depending on funding. Prior to Phase 2 implementation, an inventory would occur. Phase 2 treatments would occur over several years, depending on the inventory and funding. Defensible space treatments would occur as appropriate during all phases of the forest stand treatments.

### 2.2.5 Maintenance Treatments

The condition of the treatment areas after initial treatment would be monitored annually or as appropriate, depending upon the vegetation types and presence of eucalyptus and broom. Areas with broom and eucalyptus are anticipated to be treated to reduce resprouting every 1 to 3 years, depending upon the condition of the sites. Subsequent treatments are anticipated to be the same as the proposed project activities but are subject to change depending on the site's condition and response to initial treatment.

### 2.2.6 Workers

Typically, one crew consisting of 10 to 20 workers would be used for ground-based mechanical treatments. Typically, one hand crew consisting of 5 to 20 workers would be used for manual and handheld mechanical treatments, such as when conducting defensible space treatments. At any one time, up to three crews could be working on the project site. A qualified professional with appropriate experience would also be on site during implementation to direct activities in compliance with this PSA.

### 2.2.7 Site Access

Treatment areas would be accessed via existing roads and trails to the maximum extent feasible. Private properties, including the Mount Tamalpais Cemetery, may be used as access points, contingent on the landowner's consent. Vehicles and equipment would be staged at the contractor's yard daily or given landowner consent, along existing roads and trails on the property. Assessments would be conducted to identify access constraints for the timber operators. Haul routes would be identified prior to implementation.

## 2 PROJECT DESCRIPTION

### 2.3 Project Design and Implementation Features

The project proponent plans to meet the appropriate SPRs under the CalVTP PEIR, as noted in Section 3. Additionally, the MWPA has developed specific design and implementation features adapted from several source documents that would be incorporated as applicable into the project design and implementation for each of its projects. The *project design and implementation features* (PDIFs) appropriate to the proposed project are listed in Table 3 in Attachment B. PDIFs are not needed to address any new impacts but are a standard part of MWPA Core Projects. Table 3 also notes which PDIFs would meet the SPRs, where appropriate, and which PDIFs do not have a comparable SPR but are relevant to the proposed project. As discussed under Workers (Section 2.2.6, above), a qualified professional with appropriate experience would also be on site during implementation to direct activities in compliance with this PSA.

### 3 The California Vegetation Treatment Program Environmental Checklist

#### Project Information

- |  |   |
|--|---|
| 1. Project title   | San Rafael – San Anselmo Fuel Reduction Project   |
| 2. Project proponent name and address  | Marin Wildfire Prevention Authority<br>1600 Los Gamos Dr. Suite 345 & 335<br>San Rafael, CA 94903 |
| 3. Contact person information and phone number   | Anne Crealock, Planning and Program Manager<br>(415) 231-3913                                     |
| 4. Project location  | City of San Rafael, Marin County, CA. See Figure 1.   |
| 5. Total area to be treated (acres)  | 159-acre WUI fuel reduction area  |
| 6. Description of project (Describe the whole action involved, including any phasing of initial treatments as well as planned treatment maintenance, including equipment to be used and planned duration of treatments. Provide cross reference to specific subsections and page numbers from Chapter 2 of the PEIR to demonstrate that treatments are consistent with those analyzed in the PEIR. Attach additional sheets if necessary.) |   |
|  | See Chapter 2: Project Description  |
| 7. Treatment types (See description in CalVTP PEIR Section 2.5.1. Check every applicable category; provide detail in Description of Project.)  |   |

Wildland-urban interface fuel reduction

Fuel break

Ecological restoration

8. Treatment activities (See description in CalVTP PEIR Section 2.5.2. Check every applicable category; include number of acres subject to each treatment activity; provide detail in description of Initial Treatment.)

Prescribed burning (broadcast)

Prescribed burning (pile burning), of fuel collected from up to 159 acres

Mechanical treatment: 159 acres of WUI fuel reduction

Manual treatment, up to 159 acres of WUI fuel reduction

Prescribed herbivory, as and where appropriate

Herbicide application, as and where appropriate within areas of the up to 159-acre project area

### 3 CALVTP PSA CHECKLIST

9. Fuel type (See description in CalVTP PEIR Section 2.4.1. Check every applicable category; provide detail in description of Initial Treatment]

- Grass fuel type
- Shrub fuel type
- Tree fuel type

10. Geographic scope

- The treatment site is entirely within the CalVTP treatable landscape.
- The treatment site is NOT entirely within the CalVTP treatable landscape.

11. Surrounding and uses and setting

The project area is in the city of San Rafael, town of San Anselmo, and surrounding areas in northern Marin County. The proposed project would be implemented on private and public lands within Marin County, the town of San Anselmo, and the city of San Rafael as well as on lands managed by the MCOSD/Marin County Parks and other local jurisdictions. The area is a mixture of open space and urban communities, predominantly residences at the outskirts of the town of San Anselmo and the city of San Rafael, at the WUI. The project area is dominated by non-native forest habitat types, with portions of grassland, developed land, and native forest. The vegetation communities in the project area include eucalyptus, grassland, shrub, and oak and mixed woodland.

12. Other Public Agencies Whose Approval is Potentially Required

Agency	Approval or notification	Component of program
California Department of Transportation (Caltrans)	encroachment permits	for trimming or removal of trees within and encroachment on Caltrans right-of-way
Caltrans	transportation permits	for oversize or overweight vehicles traveling on Caltrans right-of-way
California Department of Forestry and Fire Protection	burn permit	for any pile burn activities in the State Responsibility Area
California Department of Fish and Wildlife	streambed alteration agreement	for work within jurisdictional waters
Bay Area Air Quality Management District	Open Burning Regulation 5 Notification Form	for any pile burn activities
San Francisco Regional Water Quality Control Board	waste discharge requirement	for potential impacts to waters of the state that are not waters of the U.S.
MCOSD/Marin County Parks	right-to-enter permit	for treatment activities and other access to MCOSD/Marin County Parks lands
Marin County	tree removal permit	for removal of native or protected trees
Town of San Anselmo public works	tree removal permit	to remove or significantly prune any heritage tree, any tree on undeveloped property and any street tree

### 3 CALVTP PSA CHECKLIST

Agency	Approval or notification	Component of program
City of San Rafael	tree removal permit	to cut, prune, break, or injure or remove any living tree on any public street, sidewalk, or walkway or put chemical on any tree

**13. Coastal Act compliance**

- The proposed project is NOT within the Coastal Zone.
- The proposed project is within the Coastal Zone (check one of the following boxes).
  - A coastal development permit been applied for or obtained from the local Coastal Commission district office or local government with a certified Local Coastal Plan, as applicable.
- The local Coastal Commission district office or local government with a certified Local Coastal Plan (in consultation with the local Coastal Commission district office) has determined that a coastal development permit is not required.

**14. Native American consultation**

(Pursuant to PRC Sections 21080.3.1, 21080.3.2, and 21082.3, lead agencies undertaking CEQA review must, upon written request of a California Native American tribe, begin consultation before the release of an Environmental Impact Report, Negative Declaration, or Mitigated Negative Declaration. For treatment projects that require additional CEQA review and documentation, have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.? Note: For treatment projects that are within the scope of this PEIR, AB 52 consultation has been completed. The Board of Forestry and Fire Protection and CAL FIRE completed consultation pursuant to Public Resources Code section 21080.3.1 in preparation of the PEIR.)

Pursuant to SPR CUL-2, MWPA contacted culturally affiliated tribes via email in September 2023 with project information and a solicitation for any relevant information regarding the project area. A response was provided by the NAHC on April 24, 2023, which stated that there are no Native American sacred sites within the project area. The project is within the scope of the PEIR and does not require additional CEQA review and documentation.

**15. Use of the PSA for treatment maintenance**

(Prior to implementing a maintenance treatment, the project proponent would verify that the expected site conditions as described in the PSA are present in the treatment area. As time passes, the continued relevance of the PSA would be considered by the project proponent in light of potentially changed conditions or circumstances. Where the project proponent determines that the PSA is no longer sufficiently relevant, the project proponent would determine whether a new PSA or other environmental analysis is warranted. In addition to verifying that the PSA continues to provide relevant CEQA coverage for treatment maintenance, the project proponent would update the PSA at the time a maintenance treatment is needed when more than 10 years have passed since the approval of the PSA or the latest PSA update. For example, the project proponent may conduct a reconnaissance survey to verify that conditions are substantially similar to those anticipated in the PSA. Updated information should be documented.)

Prior to re-treating any area within the project boundary, City of San Rafael Fire Department and Ross Valley Fire Department would verify that site conditions described in the PSA are still relevant. Maintenance treatments would be ongoing and are covered under this PSA, but this PSA would be updated as appropriate.

**16. Standard project requirements and mitigation measures**

(Refer to Attachment B to identify which SPRs and Mitigation Measures apply to the project. Complete Attachment B to document the responsible party for each applicable SPR and Mitigation Measure. Check one box below.)

- All applicable SPRs and Mitigation Measures are feasible and will be implemented.

### 3 CALVTP PSA CHECKLIST

- There is NO new information which would render mitigation measures previously considered infeasible or not considered in the CalVTP EIR now feasible OR such mitigation measures have been adopted (Guidelines Sec. 15162 [a][3]; PRC Sec. 21166[c])
- All applicable SPRs and Mitigation Measures are NOT feasible or will NOT be implemented (*provide explanation*).

Explanation:

## Determination

On the basis of this initial evaluation:

I find that all the effects of the proposed project (a) have been covered in the CalVTP PEIR, and (b) all applicable Standard Project Requirements and mitigation measures identified in the CalVTP PEIR will be implemented. The proposed project is, therefore, WITHIN THE SCOPE of the CalVTP PEIR. NO ADDITIONAL CEQA DOCUMENTATION is required.

I find that the proposed project will have effects that were not covered in the CalVTP PEIR. These effects are less than significant without any mitigation beyond what is already required pursuant to the CalVTP PEIR. A NEGATIVE DECLARATION will be prepared.

I find that the proposed project will have effects that were not covered in the CalVTP PEIR or will have effects that are substantially more severe than those covered in the CalVTP PEIR. Although these effects may be significant in the absence of additional mitigation beyond the CalVTP PEIR's measures, revisions to the proposed project or additional mitigation measures have been agreed to by the project partners that would avoid or reduce the effects so that clearly no significant effects would occur. A MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project will have significant environmental effects that are (a) new and were not covered in the CalVTP PEIR and/or (b) substantially more severe than those covered in the CalVTP PEIR. Because one or more effects may be significant and cannot be clearly mitigated to less than significant, an ENVIRONMENTAL IMPACT REPORT will be prepared.



10/26/2023

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Anne Crealock  
Printed Name

\_\_\_\_\_  
Planning and Program Manager  
Title

## Evaluation of Environmental Impacts

1. A brief explanation is required for each impact, standard project requirement (SPR), and mitigation measure (MM) identified in the Project-Specific Analysis Checklist (PSA Checklist). The information provides clarity for review and/or provides direction to the field staff that will implement the project utilizing the checklist (persons familiar with the project and preparation of the document may vary throughout the lifespan of the document). Answers should consider whether the proposed project would result in new or more substantial environmental effects than described in the CalVTP PEIR, after incorporation of applicable SPRs and MM required by the CalVTP PEIR.
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and short-term as well as long-term impacts. Refer to the applicable resource analysis section in the CalVTP PEIR for each environmental topic.
3. Once the project proponent has evaluated the environmental effect that may occur, then the checklist answers must indicate whether the impact is (definitions located in the CalVTP PEIR Chapter 3 Environmental Settings, Impacts, and Mitigation Measures, Section 3.1.4 Terminology Used In the PEIR):
  - a. **Less than significant (LTS):** An impact, either on its own or with incorporation of SPRs, does not exceed the defined thresholds of significance (no mitigation required) or is potentially significant and can be reduced to less than significant through implementation of feasible mitigation measures.
  - b. **Less than significant with mitigation (LTSM):** An impact was identified within the PEIR that was viewed in totality as potentially significant and/or significantly unavoidable, and the mitigation measures and SPRs and MMs provided in the PEIR will be implemented, mitigating to a point of less than significance.
  - c. **Potentially significant (PS):** An impact treated as if it were a significant impact. "Potentially" is used to convey that not every qualifying treatment will result in impacts to the reasonably maximum degree that they are disclosed in this PEIR.
  - d. **Potentially significant and unavoidable (PSU):** An impact is considered significant and unavoidable if it would result in a substantial adverse change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level. "Potentially" is used to convey that not every qualifying treatment will result in impacts to the reasonably maximum degree that they are disclosed in this PEIR.
  - e. **Significant and unavoidable (SU):** An impact is considered significant and unavoidable if it would result in a substantial adverse change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level.

### 3 CALVTP PSA CHECKLIST

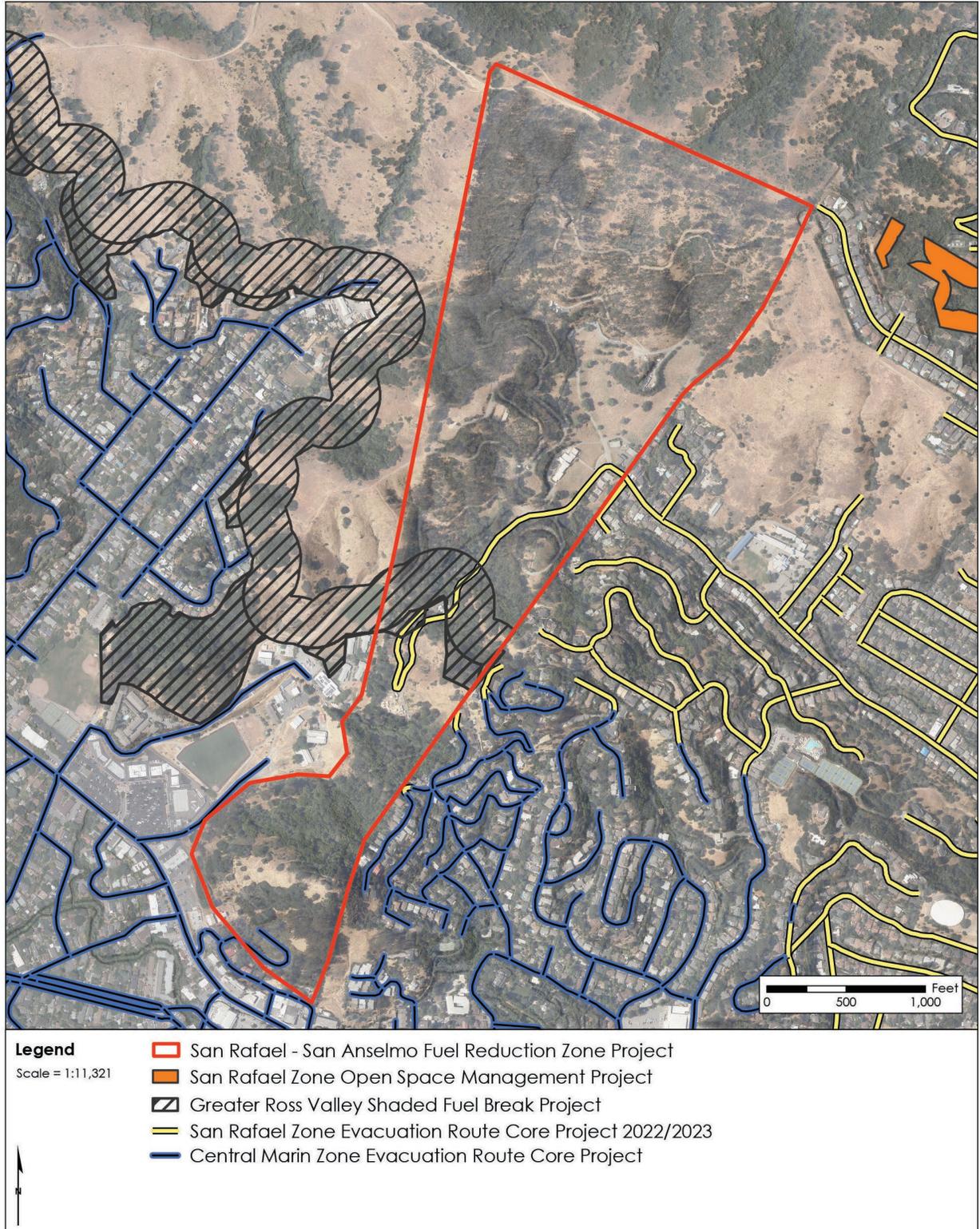
- f. **Not applicable (N/A):** If the impact is determined to be the same or equal to the impact in the PEIR, the PEIR can be utilized without a Negative Declaration, Mitigated Negative Declaration, or EIR. If there are one or more entries where the impact is evaluated to be greater than the impact in the PEIR, additional documentation is required.
4. Where a Negative Declaration or Mitigated Negative Declaration is required, the environmental review would be guided by the directions for use of the PEIR with later activities in Section 15168. Where an EIR is required, the environmental review would be guided by Sections 15162 and 15163. In the preparation of any environmental document, the environmental analysis may incorporate by reference the analysis from the CalVTP PEIR and focus the environmental analysis solely on issues that were not addressed in the CalVTP PEIR.
5. Standard project requirements (SPRs) and mitigations measures (MMs).
  - a. **Applicable (yes/no).** Document whether the SPR or mitigation measure is applicable to the project (*yes* or *no*). The applicability should be substantiated in the Environmental Checklist Discussion.
  - b. **Implementing entity.** The implementing entity is the individual or organization responsible for carrying out the requirement. This could include the project proponent's project manager, a technical specialist (e.g., archaeologist or biologist), a vegetation management contractor, a partner agency or organization, or other entities that are primarily responsible for carrying out each project requirement.
  - c. **Verifying/monitoring entity.** The verifying/monitoring entity is the individual or organization responsible for ensuring that the requirement is implemented. The verifying/monitoring entity may be different from the implementing entity.
  - d. **Note:** The cited SPRs and MMs are summarized to manage the template size. Refer to Attachments B and F for the approved CalVTP

## Cumulative Scenario

The CalVTP PEIR included a cumulative analysis following the State CEQA Guidelines. This analysis assumed 250,000 acres treated annually under the CalVTP spanning the State of California. It also considered related programs such as other activities conducted by CAL FIRE, plans, projects, and activities that would affect the same resources as the CalVTP in similar ways, and activities conducted by other entities outside of the SRA (within the Federal Responsibility Area [FRA] and LRA) that would affect the same resources as the CalVTP in similar ways (PEIR, page 4-1). The broad nature of the cumulative analysis in the CalVTP PEIR takes into account projects occurring in the San Rafael area that are not specifically identified in the CalVTP PEIR analysis. However, in order to inform the public about known cumulative projects in the area of the RSFB, Figure 6, along with Table 3-1, were created.

### 3 CALVTP PSA CHECKLIST

Figure 6 Cumulative Projects



### 3 CALVTP PSA CHECKLIST

**Table 3-1 San Rafael and Central Marin Region Vegetation Management Projects**

<b>Number</b>	<b>Cumulative project name</b>	<b>Description</b>	<b>Cumulative project acres/miles</b>	<b>Within treatable landscape (miles/acres)</b>
1	San Rafael Zone Evacuation Route Core Project 2022/2023	Vegetation thinning up to 30 feet from the road edge on evacuation routes throughout the city of San Rafael	360 miles	0.5 mile
2	Central Marin Zone Evacuation Route Core Project	Vegetation thinning up to 100 feet from the road edge on prioritized roadways throughout the Central Marin Zone	241 miles	0.1 acre
3	San Rafael Zone Open Space Management Project	Fuels reduction along the boundary of City of San Rafael-owned open space areas. The project would treat vegetation within 150 feet of structures and 50 feet of roadways.	78 acres	0.6 acre
4	Greater Ross Valley Shaded Fuel Break Project	The project would create a continuous 38-mile-long shaded fuel break and reduce fuel loads in WUI areas. The project would reduce fuels within a 300-foot-wide fuel break	1379-acre fuel break and 497 acres of WUI fuels reduction	936 acres

### 3 CALVTP PSA CHECKLIST

## 3.1 Aesthetics and Visual Resources

### 3.1.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
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?	LTS	Impact AES-1, pp. 3.2-16–3.2-19	yes	AES-2, AQ-2, AQ-3, REC-1	NA	LTS	no	yes
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?	LTS	Impact AES-2, pp. 3.2-20–3.2-25	yes	AD-4, REC-1, AES-1, AES-2, AES-3	NA	LTS	no	yes
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?	SU	Impact AES-3, pp. 3.2-25–3.2-27	no	NA	none	no impact	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

### 3 CALVTP PSA CHECKLIST

New aesthetic and visual resource impacts: Would the treatment result in other impacts to aesthetics and visual resources that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.1.2 Discussion

##### Impact AES-1

The proposed project would develop and maintain a reduced-fuel and forest-health-restoration zone through use of manual treatments, ground-based mechanical treatments, prescribed herbivory, and targeted herbicide application as well as biomass disposal, including pile burning. The potential for these treatment activities to result in short-term degradation of the visual character of a treatment area was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.2.3, pages 3.2-16–3.2-19). The visual character within the fuels reduction zone is characterized by primarily residential areas, a cemetery and school, eucalyptus stands, grassland, and recreational open space. The treatments would occur on private lands as well as publicly owned lands managed primarily by MCOSED in unincorporated Marin County, the City of San Rafael and Town of San Anselmo.

Marin County, the City of San Rafael and the Town of San Anselmo all have general plans that identify ridgelines and hillsides as one of their scenic resources (Marin County 2007, City of San Rafael 2021, Town of San Anselmo 2019). Red Hill is one of the ridgelines and hilltops that the Town of San Anselmo has specifically identified as one to be preserved and protected from development (Town of San Anselmo 2019). The proposed project would implement fuel break treatments on Red Hill, including the removal of smaller dbh stands of eucalyptus trees. There are no eligible or designated State Scenic Highways within the vicinity or visible from the proposed project area.

Viewers in the vicinity of the treatment areas would be mostly residents, recreationalists using nearby trails and open space, visitors at the cemetery and, potentially, some people traveling by vehicle on nearby roads. Equipment and trucks performing the work and chipped and cut vegetation debris would be temporarily visible along or staged near these fuels reduction zones. Implementation of SPRs AES-2, REC-1, AQ-2, and AQ-3 requires that treatment-related equipment be stored outside of the public viewshed, that recreational users be notified of any temporary recreation area closures, and that a Smoke Management Plan be submitted for pile burning activities that trigger the threshold (17 CCR section 80160) to minimize the generation and visibility of smoke from burning activities. The potential for the project to result in short-term substantial degradation of the visual character near the project area or damage to a scenic highway visible from the proposed project area is within the scope of the PEIR because the proposed treatment activities are consistent with those analyzed in the PEIR. Impacts would be less than significant.

The inclusion of land in the proposed project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing scenic resources are essentially the same within and outside of the treatable landscape because

### 3 CALVTP PSA CHECKLIST

the vegetation types and visual context are the same and are contiguous with the treatable landscape. A viewer's experience would not naturally differentiate between portions of the project area within and outside the treatable landscape. Therefore, the short-term aesthetic impact to the lands within the CalVTP treatable landscape and outside the treatable landscape is the same, with the same SPRs applicable to minimize effects (SPR AQ-2 and SPR AQ-3). This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR. Impacts would be less than significant.

The inclusion of air burners, carbonators, or kiln burners as biomass-disposal methods constitutes a change to the treatment types presented in the PEIR but they are not larger or more visible than other treatment types, nor would they remain on the visible landscape for any longer duration than the work itself. They would generate less visible smoke than pile burning, which is included and addressed in the PEIR. A viewer's experience would be comparable to that from the treatment activities that are presented in the PEIR; therefore, the short-term aesthetic impact of use of an air burner, carbonators, or kiln burners would be consistent with that presented in the discussion in the PEIR, would be less than significant, and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

#### **Impact AES-2**

Initial and maintenance treatments would include WUI fuels reduction treatment types. The potential for these treatment types to result in long-term degradation of the visual character of an area was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.2.3, pages 3.2-20–3.2-22). Removal of hazard trees and fire-hazardous native and non-native trees, as well as the thinning of native and non-native shrubs, would result in a change in viewer experience. Larger eucalyptus trees, including eucalyptus trees along the ridgeline that are most visible, would likely not be removed. As noted in the PEIR Impact AES-2, in the case of a WUI fuels reduction zone, because not all of the existing vegetation would be cleared and large native and non-native trees would entirely or partially remain, long-term vividness, intactness, and unity of views would remain, and the treatments would not substantially affect views in the long term. The proposed project would be designed to improve habitat quality and create a landscape appearance closer to pre-fire suppression conditions, and as noted in the PEIR, it could result in long-term beneficial visual impacts. The aesthetic impacts would be temporary and short-term, and the natural characteristics of the treatment areas would remain. Implementation of SPRs AES-1, AES-2, and AES-3 would minimize long-term degradation of the visual character by thinning and feathering adjacent vegetation to break up or screen linear edges and providing vegetation screening within and adjacent treatment areas. The potential for the project to result in long-term substantial degradation of the visual character of the project area is less than significant and is consistent with the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing visual character is essentially the same within and outside of the treatable landscape as described in Impact AES-1. This determination is consistent with the PEIR and

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would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The inclusion of an air burner, carbonator, or kiln burner as a biomass disposal method constitutes a change to the treatment types presented in the PEIR but would not have any long-term visual impacts.

#### **Impact AES-3**

The proposed treatments would not include the non-shaded fuel break treatment type as specifically defined in the PEIR (CalVTP Final PEIR Section 2.5.1, page 2-11).<sup>2</sup> The proposed project would not result in the potential for long-term substantial degradation of the visual character due to non-shaded fuel break treatment types.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to the approximately up to 250,000 treated acres annually that are located within the 20.3-million-acre treatable landscape. The geographic scope of the aesthetic and visual resource cumulative impact analysis from the CalVTP PEIR is the treatable landscape and surrounding areas with public views of the treatable landscape. In addition to the lands treated under the CalVTP PEIR, there are several similar past, present, and reasonably foreseeable projects that have affected and likely would affect vegetation and, thus, aesthetics and visual resources within and surrounding the treatable landscape (CalVTP Final PEIR Section 4.4.1 page 4-11). Table 3-1 includes a list of vegetation treatment projects occurring within the San Rafael area. Based on review of the CalVTP PEIR cumulative analysis, the cumulative projects listed in Table 3-1 and the proposed project, including lands within and outside the CalVTP treatable landscape, are adequately addressed by the PEIR cumulative analysis for aesthetics. Therefore, the cumulative aesthetic impact analysis for the proposed project, including the areas outside the treatable landscape, is the same as described in the PEIR and is not cumulatively considerable for Impact AES-1 and Impact AES-2. The PEIR found that impacts are cumulatively considerable for Impact AES-3; however, since the proposed project does not include any non-shaded fuel break treatment types, the proposed project would not contribute to the significant cumulative impact.

#### **New Aesthetic and Visual Resources Impacts**

The site-specific characteristics of the proposed project are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.2.1 Environmental Setting and Section 3.2.2 Regulatory Setting in Volume II of the Final PEIR). The inclusion of land outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the project area, the existing environmental conditions pertinent to aesthetics and visual resources that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as

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<sup>2</sup> **Non-shaded fuel breaks** are typically created where there is a natural change in vegetation type, such as from forest or shrubland to grassland, and all vegetation is removed from the fuel break.

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previously described. The use of an air curtain burner, carbonator, or kiln burner constitutes a change in treatment type, but the aesthetic impacts of these biomass disposal methods are consistent with treatment types analyzed in the PEIR and would not have any new or greater types of visual impacts. The proposed project is consistent with the types of projects covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not constitute a new or substantially more severe significant impact than what was included in the PEIR. Therefore, no new impacts related to aesthetics and visual resources would occur.

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## 3.2 Agriculture and Forestry Resources

### 3.2.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
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?	LTS	Impact AG-1, pp. 3.3-7–3.3-8	yes	NA	NA	LTS	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New agricultural and forestry resources impacts: Would the treatment result in other impacts to agriculture and forestry that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.2.2 Discussion

##### Impact AG-1

The proposed project would involve implementation and maintenance of a WUI fuels reduction area. The vegetation communities in the project area include eucalyptus, grasslands, shrublands, and oak and mixed woodland. Treatment within the project area includes the removal of trees that are hazardous, fire-hazardous native trees, and trees that are non-native. Tree cover within woodlands and forested areas remaining after treatment would be consistent with the definition of forest land used in PRC 12220(g): land that can support 10-percent native tree cover of any species under natural conditions. Treatments would include the removal of trees in the overstory and mid-level canopy to improve forest health and reduce wildfire risk; however, treatments would not affect the native forest stand conditions directly or indirectly in a way that could result in conversion to a non-forest use. Vegetation management has the potential to improve the forest stand conditions by removing competitive non-native or overcrowded native vegetation and returning the forests to more natural conditions. The impacts to forestry resources of the proposed project are within the scope of the PEIR because the proposed treatment activities are consistent with those analyzed in the PEIR. Impacts of the proposed project would be less than significant, and no SPRs or mitigation are required.

The proposed project includes treatment on land that is outside the CalVTP treatable landscape, which constitutes a minor change to the geographic extent presented in the PEIR. Within the boundary of the project area, the existing conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because the vegetation types are the same and are contiguous with the treatable landscape. This impact would also be less than significant and within the scope of the PEIR because the impacts to forested land as defined in PRC 12220(g) is essentially the same within and outside the treatable landscape, as previously described. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The use of an air curtain burner, carbonator, and kiln constitutes a change in treatment type that is consistent with the types analyzed in the PEIR. Therefore, the impacts of the proposed treatment project are also consistent with those covered in the PEIR.

##### Cumulative Impacts

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to some of the approximately 250,000 acres treated annually that are located within the 20.3-million-acre treatable landscape. The geographic scope for agricultural and forestry resources is the treatable landscape (CalVTP

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Final PEIR Section 4.4.2, page 4-12). The cumulative projects listed in Table 3-1 are consistent with the cumulative projects identified in the CalVTP EIR. The inclusion of treatment areas outside the treatable landscape would expand the geographic scope for the cumulative analysis but would not result in the loss of forest land or conversion of forest land to a non-forest use. Although treatment activities would alter forest land through vegetation removal, the activities would be temporary and, once treatment activities are complete, the area would remain undeveloped, existing forest. Therefore, the proposed project's contribution to the loss of forest land or conversion of forest land to non-forest use would not be cumulatively considerable and would be consistent with the analysis in the PEIR.

#### **New Agriculture and Forestry Resource Impacts**

The site-specific characteristics of the proposed treatment project have been considered and found to be consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.3.1 Environmental Setting and Section 3.3.2 Regulatory Setting in Volume II of the Final PEIR). The project proponent has also determined that the inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because the vegetation types are the same and are contiguous to the treatable landscape. The use of an air curtain burner, carbonator, and kiln also constitutes a change in treatment type that is consistent with the types analyzed in the PEIR. Therefore, the impacts of the proposed treatment project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape, as well as the addition of the air curtain burner, would not give rise to any new significant impacts not addressed in the PEIR. Therefore, no new impact related to agriculture and forestry resources would occur that is not covered in the PEIR.

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## 3.3 Air Quality

### 3.3.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact AQ-1: Generate emissions of criteria air pollutants and precursors during treatment activities that would exceed CAAQS or NAAQS?	SU	Table 3.4-1; Impact AQ-1, pp. 3.4-26–3.4-32; Appendix AQ-1	yes	AD-4, AQ-1 through AQ-6	AQ-1	PSU	no	yes
Impact AQ-2: Expose people to diesel particulate matter emissions and related health risk?	LTS	Table 3.4-6; Impact AQ-2, pp. 3.4-33–3.4-34; Appendix AQ-1	yes	AQ-1, HAZ-1, NOI-4, NOI-5	NA	LTS	no	yes
Impact AQ-3: Expose people to fugitive dust emissions containing naturally occurring asbestos and related health risk?	LTS	Section 3.4.2; Impact AQ-3, pp. 3.4-34–3.4-35	yes	AQ-4, AQ-5	NA	LTS	no	yes

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Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact AQ-4: Expose people to toxic air contaminants emitted by prescribed burns and related health risk?	SU	Section 3.4.2; Impact AQ-4, pp. 3.4-35–3.4-37	yes	AD-4, AQ-2, AQ-3, AQ-6	NA (no feasible mitigation available)	PSU	no	yes
Impact AQ-5: Expose people to objectionable odors from diesel exhaust?	LTS	Impact AQ-5, pp. 3.4-37–3.4-38	yes	HAZ-1, NOI-4, NOI-5	NA	LTS	no	yes
Impact AQ-6: Expose people to objectionable odors from smoke during prescribed burning?	SU	Section 2.5.2; Impact AQ-6; p. 3.4-38	yes	AD-4, AQ-2, AQ-3, AQ-6	NA (No feasible mitigation available)	PSU	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New air quality impacts: Would the treatment result in other impacts to air quality that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.3.2 Discussion

##### Impact AQ-1

The proposed project would use vehicles, equipment, mechanical hand tools, pile burning, curtain burning, carbonators, and/or kiln burners during treatments, which could generate criteria air pollutants that could cause or substantially contribute to the violation of California ambient air quality standards (CAAQS) or national ambient air quality standards (NAAQS) for the San Francisco Bay Area Air Basin (SFBAAB) (California Air Resources Board 2014). Marin County is currently in non-attainment status for fine particulate matter (PM<sub>2.5</sub>) and ozone for the NAAQS and non-attainment for fine particulate matter (PM<sub>2.5</sub>), coarse particulate matter (PM<sub>10</sub>), and ozone for the CAAQS (USEPA, 2023; CARB, 2022). The potential for emissions of criteria pollutants to result in an exceedance or contribute to exceedances of CAAQS or NAAQS thresholds was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, pages 3.4-26–3.4-33). Emissions of criteria air pollutants related to the proposed project are within the scope of the PEIR because the associated equipment and duration of use, and types of treatments, are consistent with those analyzed in the PEIR.

The SPRs applicable to the proposed project include AD-4 and AQ-1 through AQ-6. SPR AD-4 requires public notification for areas with pile burning treatments prior to commencement of pile burning activities. SPRs AQ-1 through AQ-6 require the project to comply with applicable Bay Area Air Quality Management District (BAAQMD) air quality requirements, submit a Smoke Management Plan and Burn Plan if the pile burning triggers the threshold (17 CCR § 80160), and follow all safety procedures required of a CAL FIRE crew.

In addition to the SPRs, MM AQ-1 is applicable to the proposed project and would reduce exhaust emissions from off-road equipment because it would require the implementation of emission reduction techniques including using renewable diesel fuel in diesel-powered construction equipment, substituting electric and gas-powered equipment for diesel equipment, and utilizing equipment that meets the Environmental Protection Agency’s (EPA) Tier 4 emission standards. The emissions reduction techniques identified in MM AQ-1 would be feasible for the proposed project. However, given the uncertainty of whether renewable diesel fuel or electric and gas-powered equipment would be available at any specific time during the implementation of the proposed project, the project could still have impacts. The impacts, however, would be within the scope of the impacts addressed in the PEIR, which acknowledges that potentially significant and unavoidable impacts may occur. There are no changes in circumstances that would occur in the proposed project that were not evaluated in the PEIR. Following the implementation of applicable SPRs and MMs, the proposed project’s potential to generate emissions of criteria air pollutants and precursors during treatment activities that would exceed CAAQS or NAAQS and conflict with regional air quality plans would remain

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within the scope of the PEIR's analysis, which is potentially significant and unavoidable because, as stated in the PEIR, the emissions reduction as a result of implementing MM AQ-1 cannot be quantified as myriad variables are assessed in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, page 33).

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the project area, the existing air quality conditions in the areas outside the treatable landscape are the same as those within the treatable landscape, which are within the same air basin. Emissions from the proposed project are based on acreages and treatment activities and, thus, fall within the PEIR's analysis, and the impacts to air quality from the proposed project are within the scope of the PEIR's determination that the impacts would be potentially significant and unavoidable, but SPRs AD-4 and AQ-1 through AQ-6 would still be implemented.

If an air curtain burner, carbonator, or kiln burner were used, the impacts would be similar to, but less than, those resulting from the use of pile burning for biomass processing. Air curtain burners operate by trapping particles of smoke under an air curtain, which are then reburned, resulting in very high combustion efficiency (up to 99 to 100 percent reported) (Zahn 2005). Use of the air curtain burner would result in comparatively reduced emissions of carbon monoxide, methane-based gases such as butane (refer to Section 3.19 Greenhouse Gas Emissions for more information), and nonmethane gases such as benzene and significantly reduced particulate matter emissions.

Kiln burner and carbonization are forms of *pyrolysis*, or carbonization. Pyrolysis can be performed in a variety of ways, from simple oxygen-depriving designs (e.g., an Oregon kiln, or kiln burner) to more complex large-scale pyrolysis chamber systems in a fixed location that can process up to hundreds of tons of biomass per day. Pyrolysis involves the conversion of biomass into hydrocarbon liquids, gases, or solids (or all three) in the absence of oxygen at temperatures ranging from 400 to 900 degrees Celsius. A kiln burner typically consists of open top metal cylinders, where biomass is placed into the kiln and combusted, which uses a flame curtain or cap at the top of the kiln to exclude oxygen from the biomass. Carbonators and kiln burners are similar to air curtain burners in that they trap greenhouse gas emissions and particulates but they also form biochar as a byproduct (Ascent Environmental 2022). While the CalVTP PEIR does not explicitly address the use of kiln burners or carbonators, the methodology falls within and is less impactful than pile burning, which is covered under the CalVTP PEIR.

With respect to the generation of criteria air pollutants, the biomass technologies substantially reduce ROG and PM emissions when compared to pile burning, ranging between a 91-percent and 100-percent reduction. For NO<sub>x</sub> reductions, air curtain burners and carbonators are estimated to reduce NO<sub>x</sub> emissions by at least 73 percent and 39 percent, respectively. For the purposes of the comparative analysis, emissions from burning tree/woody biomass were evaluated because this is the most common type of vegetation treatment byproduct anticipated from the proposed project. These results are based on a comparison of emission factors (pound

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per acre [lb./acre]) compared to the emissions-per-acre as presented in Table 3.4-6 of the PEIR. The estimated reduction in emissions accounts for transport of biomass to off-site facilities, assuming an average of a 40-mile trip, and manual or mechanical treatment needed to process the biomass (e.g., chipping) for use in the biomass processing units (Ascent Environmental 2022). These comparisons are shown in Table 3-2.

Table 3-2 demonstrates the comparison of emissions from an air curtain burner (direct combustion), carbonator (pyrolysis on-site), and kiln burners (pyrolysis on-site, also known as an Oregon kiln) as compared with pile burning as a form of biomass processing (Ascent Environmental 2022). Since the air curtain burner burns with a 10-percent higher combustion efficiency than pile burning, other pollutants such as PM<sub>10</sub> would also be expected to be much lower than pile burning. Smoke and particulate matter emissions are low and, due to the high combustion efficiency, the risk to personnel conducting the burn or any other personnel in the area is relatively low. Use of an air curtain, carbonator, and kiln burner would be covered by the analysis in the PEIR and would not constitute a new or substantially more severe significant impact than what was included in the PEIR.

**Table 3-2 Comparison of Criteria Air Pollutants by Biomass Processing Technology (Pounds of Emissions per Acre)**

Type of biomass process	Emissions per acre Treated (lb./acre) ROG	Emissions per acre treated (lb./acre) NOx	Emissions per acre treated (lb./acre) PM <sub>10</sub>	Emissions per acre treated (lb./acre) PM <sub>2.5</sub>
Pile burning (prescribed burning) <sup>1</sup>	2,187	166	1,421	1,421
Direct combustion (on-site) (air curtain) <sup>2</sup>	81	45	54	54
Difference	(2,106)	(121)	(1,367)	(1,367)
Percent reduction	96%	39%	71%	71%
Pyrolysis (on-site) (Oregon kiln) <sup>2</sup>	44	101	417	417
Difference	(2,143)	(65)	(1,004)	(1,004)
Percent Reduction	98%	39%	71%	71%
Pyrolysis (on-site) (carbonator) <sup>3</sup>	52	10	6	6
Difference	(2,135)	(156)	(1,415)	(1,415)
Percent reduction	98%	94%	100%	100%

**Notes:**

1. From Table 3.4-6 of the Program EIR. The emissions estimates for prescribed burning, which may consist of pile burning or broadcast burning, consist of the emissions that would be generated by the combustion of

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vegetative fuels. They do not include emissions generated by trucks hauling equipment to and from treatment sites.

2. Calculated based on results from Puettman et.al. 2020 as provided in Ascent Environmental 2022.
3. Calculated based on results from Sormo et. al. 2020 as provided in Ascent Environmental 2022.

*Source : (Ascent Environmental 2022)*

#### **Impact AQ-2**

Vehicles and mechanical equipment for treatment activities would emit diesel particulate matter. The potential to expose people to diesel particulate matter was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, pages 3.4-33–3.4-34). The proposed project would comply with SPRs AQ-1, HAZ-1, NOI-4, and NOI-5, which minimize the exposure of people to diesel particulate matter emissions. SPR AQ-1 requires compliance with all applicable air quality regulations, and SPR HAZ-1 requires that all diesel and gasoline-powered equipment be properly maintained to comply with all state and federal emission requirements. In addition, SPR NOI-4 requires vegetation treatment activities and staging areas be located as far as possible from human receptors, and SPR NOI-5 restricts equipment idling time. Diesel particulate matter emissions from the proposed project would be less than significant, and its impacts are within the scope of the PEIR. Treatment activities are consistent with those addressed in the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the air quality conditions and sensitive receptors present (i.e., exposure potential) in the portions of the project outside the treatable landscape are essentially the same as those within the treatable landscape because the areas and associated receptors are adjacent and the equipment emitting the diesel particulate matter would be the same. Therefore, the air quality impact is also the same (less than significant), as described above, with the implementation of the same SPRs. There are no changes in circumstances that would occur in the proposed project that were not evaluated in the PEIR, and the impacts of the proposed project would remain less than significant.

The use of an air curtain burner, carbonator, or kiln burner for biomass processing would not result in diesel emissions. No new or greater impacts related to the air curtain burner beyond those addressed in the PEIR would occur.

#### **Impact AQ-3**

Use of vehicles and mechanical equipment during treatments would involve ground-disturbing activities. Pile burning would not involve ground disturbance although preparation for burning could require some disturbance, such as when dragging vegetation around or implementing control lines. The potential to expose people to naturally occurring asbestos (NOA)-containing fugitive dust emissions was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, pages 3.4-34–3.4-35). No known NOA sites are located within or adjacent the project area (Marin County 2023). As discussed in the PEIR, the proposed project would implement SPR AQ-4, which minimizes fugitive dust emissions during treatment activities. Potential NOA

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exposure from the proposed treatments would be less than significant and is within the scope of the activities and impacts addressed in the PEIR.

The inclusion of land in the proposed project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing environmental conditions in the portions of the project area outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent and are underlain by the same type of serpentine soils and would involve similar or the same types of ground-disturbing activities. Therefore, the asbestos exposure impact would also be the same, as described above, and would be less than significant with the implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The use of an air curtain burner, carbonator, or kiln burner for biomass processing would not constitute ground disturbance. The air curtain burner, carbonator, and kiln burners would be placed on the ground surface. No new or greater impacts than were addressed in the PEIR would result from the use of the air curtain burner, carbonator, or kiln burner.

#### **Impact AQ-4**

Pile burning and, potentially, air curtain, carbonator, or kiln burning during treatments could expose people to toxic air contaminants. Pile burning or other biomass processing treatments may be used to process vegetative debris, depending on the conditions of the work area. Pile burning and other biomass processing treatments would emit air pollutants, including particulate matter. The potential to expose people to toxic air contaminants from prescribed burning (including pile burning) was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, pages 3.4-35–3.4-37). The duration and parameters of the pile burns are within the scope of the activities addressed in the PEIR, and the potential for exposure to toxic air contaminants is also within the scope of the PEIR. The applicable SPRs include AD-4, AQ-2, AQ-3, and AQ-6. The public would be notified of any pile burning, pursuant to SPR AD-4. Implementation of SPRs AQ-2 and AQ-3 requires the submittal of a Smoke Management Plan and Burn Plan. Crews performing pile burns are required to follow all safety procedures required of a CAL FIRE crew, pursuant to SPR AQ-6. The PEIR identifies the impact from prescribed burning (which includes pile burning) as significant and unavoidable. As examined in the PEIR, no additional mitigation measures are feasible, and the impact would remain potentially significant and unavoidable. The impacts from the pile burning for the proposed project were not quantified but would fall within the finding of the PEIR of potentially significant and unavoidable.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing environmental conditions in the portions of the project area outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent, would emit the same air pollutants, and would potentially expose the same sensitive receptors. Therefore, the air quality impact would be the same, as described above. This

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determination is consistent with the PEIR and would not constitute a substantially more severe impact than what was covered in the PEIR.

The use of an air curtain burner, carbonator, or kiln burner for biomass processing would result in lower emissions of *toxic air contaminants* (TACs) such as benzene (see Table 3-2, page 3-21) as compared with pile burning activities covered in the PEIR. TACs resulting from the combustion of biomass are generally organic in nature (e.g., formaldehyde, polycyclic aromatic hydrocarbons [PAHs], benzene) and are therefore a subset of ROG emissions (Ascent Environmental, 2022). As provided in Table 3-2, the evaluated biomass conversion technologies would reduce the level of ROG emissions by at least 93 percent when compared to pile burning of equivalent areas. Therefore, the exposure of persons to TACs and related health risks would likely be substantially lower with the use of biomass conversion technologies as compared with pile burning. Impacts of emissions of TACs from the use of the air curtain, carbonator, and kiln burners would fall within the analysis of the PEIR, which identified the impacts of prescribed burning (which includes pile burning) as significant and unavoidable and, thus, fall within the finding of the PEIR.

#### **Impact AQ-5**

Use of vehicles and mechanical equipment during treatments could expose people to objectionable odors from diesel exhaust. The potential to expose people to objectionable odors from diesel exhaust was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, page 37). SPRs applicable to this treatment are HAZ-1, NOI-4, and NOI-5. All diesel and gasoline-powered equipment must be properly maintained to comply with all state and federal emission requirements (SPR HAZ-1). Also, treatment activities and staging areas would be located as far as possible from sensitive receptors, and equipment idling time would be restricted (SPRs NOI-4 and NOI-5). This impact is within the scope of the PEIR because the proposed activities, as well as the associated equipment and duration of use, are consistent with those analyzed in the PEIR.

Inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing environmental conditions in the portions of the project area outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent and the equipment emitting the odor would be the same. Therefore, the air quality impact would also be the same, as described above, with implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The use of an air curtain, carbonator, and kiln burner for biomass processing would not result in diesel emissions. No new or greater impacts than were addressed in the PEIR would result from use of the air curtain burner.

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#### **Impact AQ-6**

Pile burning and the potential use of an air curtain, carbonator, or kiln burner could expose people to objectionable odors from smoke. The potential for exposure to objectionable odors from prescribed burning (including pile burning) was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, page 38). The duration and parameters of the pile burning are consistent with the activities addressed in the PEIR, and the resultant potential for exposure to objectionable odors from smoke is also within the scope of impacts covered in the PEIR. The applicable SPRs for this treatment are AD-4, AQ-2, AQ-3, and AQ-6. As discussed under Impact AQ-4, the public would be notified of any pile burning (SPR AD-4), a Smoke Management Plan and Burn Plan would be submitted if pile burning triggers the need (17 CCR Section 80160) (SPRs AQ-2 and AQ-3), and pile burning crews would be required to follow all safety procedures required of a Cal FIRE crew (SPR AQ-6). The PEIR identifies the impact from smoke from prescribed burning (including pile burning) as significant and unavoidable. As examined in the PEIR, no additional mitigation measures are feasible, and the impact would remain significant and unavoidable. The impacts from the pile burning for the proposed project were not quantified but would fall within the finding of the PEIR of potentially significant and unavoidable.

The inclusion of land in the proposed project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing environmental conditions in the portions of the project area outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent and the treatment (i.e., pile burning) would be the same. Therefore, the air quality impact would also be the same, as described above, and would fall within the finding of the PEIR—potentially significant and unavoidable—with implementation of the same SPRs. This determination would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The use of an air curtain, carbonator, or kiln burner for biomass processing would result in much lower smoke emissions due to the increased combustion efficiency (up to 99 percent to 100 percent reported) (Ascent Environmental, 2022). Impacts from emissions of smoke from the use of the air curtain, carbonator, and kiln burner would likely be less than significant and would fall within the analysis of the PEIR, which identified the impacts of prescribed burning (including pile burning) as significant and unavoidable.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope of the air quality cumulative impact analysis from the CalVTP PEIR is the air basins within the treatable landscape. In addition to the lands treated under the CalVTP PEIR, there are several similar past, present, and reasonably foreseeable projects that have affected and likely would affect the air basin within and surrounding the treatable landscape (CalVTP Final PEIR Section 4.4.3, page 4-13). Because the treatment areas for the proposed project inside the treatable landscape and outside the treatable landscape are in same air basin and the treatment types

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would be the same, the cumulative contribution of the proposed project would be the same outside the treatable landscape as inside, and the impact conclusions from the PEIR would remain applicable. Contributions of the proposed project would be the same within the treatable landscape as outside the treatable landscape, and the cumulative air quality impact analysis would remain within the findings described in the PEIR—not cumulatively considerable for Impacts AQ-2, AQ-3, and AQ-5 and potentially cumulatively considerable for Impacts AQ-1, AQ-4, and AQ-6.

#### **New Air Quality Impacts**

The proposed treatments are consistent with the treatment types and activities covered in the CalVTP PEIR. Air emissions associated with the use of the air curtain, carbonator, and kiln burner would be the same type as those associated with pile burning; however, particulate matter emissions are lower due to the high combustion efficiency. The site-specific characteristics of the proposed treatments are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (refer to Section 3.4.1 Regulatory Setting and Section 3.4.2 Environmental Setting in Volume II of the Final PEIR). The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR, but the added acreage would not expand the total annual acreage proposed for treatment under the PEIR of 250,000 acres per year. Within the project area, the existing environmental and regulatory conditions pertinent to air quality that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent, the air basin is the same, and the treatment activities and associated air emissions would be the same. Therefore, the impacts would be the same and, for the reasons described above, impacts of the proposed project would be consistent with those covered in the PEIR. No circumstances would change, and the inclusion of areas outside of the CalVTP treatable landscape would not result in any new significant impact not addressed in the PEIR.

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## 3.4 Archaeological, Historical, and Tribal Cultural Resources

### 3.4.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact CUL-1: Cause a substantial adverse change in the significance of built historical resources?	LTS	Impact CUL-1, pp. 3.5-14–3.5-15	yes	CUL-1, CUL-2, CUL-7, CUL-8	NA	LTS	no	yes
Impact CUL-2: Cause a substantial adverse change in the significance of unique archaeological resources or subsurface historical resources?	SU	Impact CUL-2, pp. 3.5-15–3.5-16	yes	CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, CUL-6, CUL-8	CUL-2	LTSM	no	yes
Impact CUL-3: Cause a substantial adverse change in the significance of a tribal cultural resource?	LTS	Impact CUL-3, p. 3.5-17	yes	CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, CUL-6, CUL-8	None	LTS	no	yes
Impact CUL-4: Disturb human remains?	LTS	Impact CUL-4, p. 3.5-18	yes	CUL-3, CUL-7	NA	LTS	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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<p>New archaeological, historical, and tribal cultural resources impacts: Would the treatment result in other impacts to archaeological, historical, and tribal cultural resources that are not evaluated in the CalVTP PEIR?</p>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<p>If yes, provide explanation in discussion.</p>
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#### 3.4.1 Discussion

##### Background

Consistent with SPR CUL-1, records searches of the treatment area, including areas within and outside of the treatable landscape, were performed by the Northwest Information Center (NWIC) on April 24, 2023 (NWIC File No. 22-1471). The records search indicated 21 previous cultural resource studies within the project area. Of these 21 studies, none of them included fieldwork within the past 20 years. The records search identified 73 previously recorded cultural resources within the 0.25-mile buffer of the project area, none of which intersect the project area itself. Of the 73 previously recorded cultural resources studies within the 0.25-mile buffer, 71 are built environment resources and two are precontact resources. No archeological resources have been documented within the project area. The historic-era resources documented in the area include buildings, railroad and road alignments, a cemetery, mines and quarries, and refuse deposits. In general, the project area is not sensitive for encountering subsurface historic-era deposits; however, unrecorded historic resources may be present at the surface within the project area. The most likely unrecorded historic resource that could be impacted by project activities are older grave sites within the Mount Tamalpais Cemetery, which was dedicated in 1879, that have been encountered in areas of the property that are challenging to maintain, often under cover of thick vegetation. The Mount Tamalpais Cemetery has not been evaluated for listing on the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). The precontact archaeological sites identified outside of the project area have not been evaluated for listing on the NRHP or CRHR. A site sensitivity analysis was prepared for the proposed project by Far Western Anthropological Group (Far Western) to identify areas of high potential sensitivity for cultural resources. The records search results and sensitivity analysis are provided in the confidential cultural report (Attachment C).

The Board of Forestry sent letters to 12 Native American tribes on February 9, 2019, notifying each that the PEIR was being prepared under CEQA, as required by California Public Resources Code section 21080.3.1. Four tribes requested initiation of tribal consultation. Tribal consultation has been completed with these tribes pursuant to California PRC section 21074. No tribal cultural resources were identified during consultation conducted for the PEIR. SPR CUL-2 requires notification of any geographically affiliated Native American tribe(s). The project proponent sent letters to the Federated Indians of Graton Rancheria and Guidiville Indian Rancheria with a description of the project and details of the project location in September 2023. MWPA and the Federated Indians of Graton Rancheria have exchanged emails and been in communication regarding the project and an opportunity to participate in the field survey activities.

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#### **Impact CUL-1**

Proposed treatment activities include manual treatments, ground-based mechanical treatments, herbicide application, and burning for biomass disposal, including pile, curtain, carbonator, and kiln burning. These activities have some potential to damage historical resources. Use of targeted herbicides and manual treatments would generally not damage potential historical resources because such resources could be avoided. The cultural resources records search did not identify any historic-era archaeological resources. However, there is a possibility that unrecorded cultural resources may be present at the surface within the project area that have been obscured by vegetation and development or in areas that were not subject to previous survey efforts including historic-era archaeological sites. A portion of the project area falls within the Mount Tamalpais Cemetery. All areas currently used by the cemetery for burials would be avoided by the project vegetation treatment activities. However, some of the oldest areas of the cemetery have fallen into disrepair, with extensive vegetation growth and natural erosion obscuring headstones, and overlap with planned eucalyptus removal areas. The potential for treatment activities to result in disturbance to, damage to, or destruction of built-environment structures, including those that have not yet been evaluated for historical significance, was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, page 3.5-14-3.5-15). SPR CUL-3 requires pre-field research prior to implementing treatments to identify any other structures that may be 50 years old or older, and SPR CUL-4 would require a site-specific survey. Structures (e.g., buildings, bridges, roadways) more than 50 years old, including potential historical resources such as old burial headstones or associated structures in the cemetery, that have not been evaluated for historical significance and are present in the treatment area would be avoided pursuant to SPR CUL-7. No pile burning or mechanical treatment activities would occur within 100 feet of the built historical resource without consultation with, and receipt of written approval from, a qualified archaeologist. Buffers less than 100 feet for built historical resources would only be used after consultation with, and receipt of written approval from, a qualified archaeologist. All crew members and contractors implementing treatment activities would be trained in the protection of sensitive archaeological, historic, or tribal resources (SPR CUL-8). Impacts would be less than significant with the implementation of these measures.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, because the treatments inside and outside the treatable landscape are the same, and the records search was conducted for the overall project site plus a 0.25-mile buffer, the potential impact to historical resources is also the same, as described above, and would be less than significant with implementation of the SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Use of an air curtain, carbonators, and kiln burner as a means of biomass disposal was not analyzed in the CalVTP. An air curtain, carbonator, or kiln burner would be placed on existing disturbed areas, flat, generally clear areas, or paved areas such that they would not be located adjacent to historic resources. This impact is within the scope of the PEIR because the intensity

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of ground disturbance of the project treatments is consistent with that analyzed in the PEIR. Use of the air curtain, carbonator, and kiln burners would not impact historic resources as they would not be placed near structures, including historic structures, per SPR CUL-7. The use of the air curtain, carbonator, and kiln burner would not constitute a substantially more severe significant impact than what was covered in the PEIR.

#### **Impact CUL-2**

Vegetation treatments would include the use of heavy equipment, pile burning, and pulling of invasive understory species as well as potentially removing eucalyptus stumps, if determined to be a hazard, which may result in soil disturbance. These treatment activities have the potential to result in inadvertent discovery of unique archaeological resources or subsurface historical resources, as discussed in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, pages 3.5-15–3.5-16). The site sensitivity analysis prepared for the project (Attachment C) identified a low potential for buried archaeological sites within the overall project area (Far Western 2023). The cultural resources records search revealed no known archaeological resources within the treatment areas. The recorded precontact sites are outside of the project area and would be avoided. As stated above, there is a possibility that unrecorded cultural resources may be present at the surface within the project area, including precontact and subsurface historic-era archaeological sites. The potential for these treatment activities to result in impacts to unique archaeological resources or subsurface historical resources was evaluated in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, pages 3.5-15–3.5-16) and was found to be potentially significant and unavoidable in the PEIR. The impact would be less than significant for the proposed project with implementation of SPRs and mitigation and is within the scope of the PEIR.

Proposed treatments for the project would primarily involve very shallow soil disturbance, limiting the potential for effects. In discrete areas, some deeper soil disturbance could occur if a stump must be removed to address a hazard. There is always a potential for unknown unique archaeological resources or subsurface historical resources to be inadvertently damaged during treatment activities. SPRs CUL-1 through CUL-6 and CUL-8 would be implemented to minimize the risk of inadvertently damaging a previously unknown unique archaeological resource or subsurface historical resources during treatment activities. The applicable SPRs require the following:

- An archaeological and historical resource record search would be conducted (SPR CUL-1, already conducted for this PSA).
- All geographically affiliated Native American tribes would be contacted (SPR CUL-2, already conducted for this PSA); pre-field research would be conducted prior to treatment implementation (SPR CUL-3).
- A site-specific archaeological survey in areas with known cultural resources, areas identified as having high sensitivity for historic-era or buried resources where surveys were not conducted previously, or areas containing tribal cultural resources, as identified by any geographically affiliated tribe(s), would be

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conducted and archaeological resources treated, if needed (SPRs CUL-4 and CUL-5).

- Culturally affiliated tribes (e.g., Graton Tribe) would be notified if cultural resources are identified within a treatment area and cannot be avoided (SPR CUL-6).
- All crew members and contractors implementing treatment activities would be trained in the protection of sensitive archaeological, historical, and tribal cultural resources (SPR CUL-8).

The proposed project would also implement MM CUL-2 to further reduce impacts to unknown unique archaeological or subsurface historical resources by ceasing all ground-disturbing activity within 100 feet of the discovery of any previously unknown resource until a qualified archaeologist or archaeologically trained resource professional assesses the significance of the find.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, the potential for discovery of archaeological resources is essentially the same within and outside the treatable landscape because they are adjacent and have similar vegetation and historic use. Therefore, the potential impact to unique archaeological resources or subsurface historical resources is the same and would be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact.

Use of an air curtain, carbonator, or kiln burner as a means of biomass disposal was not analyzed in the CalVTP. An air curtain, carbonator, or kiln burner would be placed on existing disturbed areas or paved areas such that they would not be located adjacent historic resources. This impact is within the scope of the PEIR because the intensity of ground disturbance of the project treatments is consistent with that analyzed in the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

#### **Impact CUL-3**

The Native American Heritage Commission (NAHC) was contacted on March 10, 2023, to request a review of their Sacred Lands File for this proposed project and list of individuals/groups who might have knowledge concerning cultural and tribal resources within the project area. The NAHC's response, dated March 17, 2023, stated that there are no Native American sacred sites documented within the project area and provided a list of three Native American contacts in the Federated Indian Graton Rancheria and Guidiville Indian Rancheria who could provide additional information about archaeological and/or tribal resources in the project area. Letters were sent on September 5 and 6, 2023, to Graton Rancheria and Guidiville Indian Rancheria, respectively, according to the NAHC list. The potential for the proposed treatment activities to cause a substantially adverse change in the significance of a tribal cultural resource during vegetation treatment was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, page 17). As explained in the PEIR, while tribal cultural resources may be identified within the treatable

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landscape during treatment activities, implementation of SPRs would avoid any substantial adverse change to any tribal cultural resource. Specifically, SPR CUL-6 requires that the project proponent, in consultation with any culturally affiliated tribe(s), would develop effective protection measures for important tribal cultural resources identified by the tribe(s) to be located within treatment areas.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, the tribal cultural affiliations present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact to tribal cultural resources is also the same, as described above. SPRs applicable to this treatment include CUL-1 through CUL-6 and CUL-8. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Use of an air curtain, carbonator, and kiln burner as a means of biomass disposal was not analyzed in the CalVTP. An air curtain, carbonator, or kiln burner would be placed on an existing disturbed area or paved areas and would be unlikely to impact tribal resources. Impacts would be less than significant in conformance with the PEIR.

#### **Impact CUL-4**

Initial and maintenance treatments would include manual treatments, ground-based mechanical treatments, and pile burning for biomass disposal which would result in ground-disturbing activities. The Project site intersects the Mount Tamalpais Cemetery, which was founded in 1879 and is still an active cemetery. Older grave sites have been encountered in areas of the property that are challenging to maintain, often under cover of thick vegetation. The potential for treatment activities to uncover human remains was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, page 3.5-17) and found to be less than significant. The potential for human remains to be uncovered during the implementation of the treatment project would be minimal due to the nature of the work and the limited resultant ground disturbance from the types of activities proposed. In areas where the project area overlaps with the overgrown areas of Mount Tamalpais Cemetery, a site-specific archaeological survey would be conducted (SPR CUL-4) both before and during the work to ensure no resources are overlooked due to the existing vegetation growth. If any burials are found, any buffers less than 100 feet around the resource would only be allowed after consultation and written approval of a qualified archaeologist (SPR CUL-6). Extreme caution should be exercised when trimming vegetation within the cemetery property, and workers would avoid stepping on or driving off-road equipment over graves when travelling to and from work locations. This direction would be included in the training for this work (SPR CUL-7). The impact would be within the scope of the PEIR because the treatment activities and the level of ground disturbance would be consistent with those analyzed in the PEIR.

Should human remains be encountered in the course of implementing the proposed project, as stated in the PEIR, crew leaders would comply with California Health and Safety Code sections

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7050.5 and 7052 and PRC section 5097 . In the event of discovery of human remains, no further disturbance or excavation of the site and the human remains would occur, and the site would be left undisturbed. Impacts would be less than significant.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, the potential for discovery of human remains is essentially the same within and outside the treatable landscape because they are adjacent and have similar vegetation and historic use. Therefore, the potential impact to human remains is also the same as previously described and less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope of the archaeological, historical, and tribal cultural resources impact analysis from the CalVTP PEIR is the state of California. In addition to the lands treated under the CalVTP PEIR, there are several similar past, present, and reasonably foreseeable projects that have affected and likely would affect cultural resources, within and surrounding the treatable landscape, and cultural resources are considered nonrenewable members of finite classes (CalVTP Final PEIR Section 4.4.4, page 4-14 and Table 3-1). Contributions of the proposed project would be the same within the treatable landscape as outside the treatable landscape, and the cumulative cultural impact analysis would remain the same as described in the PEIR. The proposed project would not constitute a cumulatively considerable contribution to an otherwise significant cumulative impact related to known unique archaeological resources, subsurface historical resources, built environment historical resources, or human remains.

#### **New Archaeological, Historical, and Tribal Cultural Resource Impacts**

The proposed treatment is consistent with the treatment types and activities considered in the CalVTP PEIR. The site-specific characteristics of the proposed project are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.5.1 Environmental Setting and Section 3.5.2 Regulatory Setting in Volume II of the Final PEIR). The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a changed circumstance to the geographic extent presented in the PEIR. However, within the project area, the existing environmental and regulatory conditions pertinent to archaeological, historical, or tribal cultural resources that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as previously described. The use of an air curtain, carbonator, and kiln burner constitutes a change in treatment type, but the cultural impacts of these burners are consistent with those of the types of treatments analyzed in the PEIR and would not constitute new or greater impacts to cultural resources. The proposed project is consistent with the types of projects covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not constitute a new or substantially more severe significant impact

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than what was included in the PEIR. Therefore, no new impact related to archaeological, historical, or tribal cultural resources or human remains would occur.

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## 3.5 Biological Resources

### 3.5.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact BIO-1: Substantially affect special-status plant species either directly or through habitat modifications?	LTSM	Impact BIO-1, pp 3.6-131–3.6-138	yes	BIO-1, BIO-2, BIO-7, BIO-9, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HAZ-5	BIO-1a, BIO-1b	LTSM	no	yes

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Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact BIO-2: Substantially affect special-status wildlife species either directly or through habitat modifications?	LTSM	Impact BIO-2, pp 3.6-138–3.6-184	yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-8, BIO-9, BIO-10, BIO-11, HAZ-5, HAZ-6, HYD-1, HYD-2, HYD-3, HYD-4, HYD-5	BIO-2a, BIO-2b	LTSM	no	yes
Impact BIO-3: Substantially affect riparian habitat or other sensitive natural community through direct loss or degradation that leads to loss of habitat function?	LTSM	Impact BIO-3, pp 3.6-186–3.6-191	yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-9, HYD-4	MM BIO-3a, MM BIO-3c	LTSM	no	yes

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Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact BIO-4: Substantially affect state or federally protected wetlands?	LTSM	Impact BIO-4, pp 3.6-191–3.6-192	yes	BIO-3, BIO-4, HYD-1, HYD-2, HYD-3, HYD-4, HYD-5	MM BIO-4	LTSM	no	yes
Impact BIO-5: Interfere substantially with wildlife movement corridors or impede use of nurseries?	LTSM	Impact BIO-5, pp 3.6-192–3.6-196	yes	BIO-1, BIO-2, BIO-4, BIO-5, BIO-10, BIO-11, HYD-5	MM BIO-5	LTSM	no	yes
Impact BIO-6: Substantially reduce habitat or abundance of common wildlife?	LTS	Impact BIO-6, pp. 3.6-197–3.6-198	yes	BIO-1, BIO-2, BIO-12	NA	LTS	no	yes
Impact BIO-7: Conflict with local policies or ordinances protecting biological resources?	No Impact	Impact BIO-7, pp 3.6-198–3.6-199	yes	AD-3	NA	No impact	no	yes

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Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact BIO-8: Conflict with the provisions of an adopted natural community conservation plan, habitat conservation plan, or other approved habitat plan?	No impact	Impact BIO-8, pp. 3.6-199–3.6-200	no	NA	NA	No impact	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New biological resource impacts: Would the treatment result in other impacts to biological resources that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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## 3.5.2 Discussion

### Baseline Studies

#### Field Surveys

Pursuant to SPR BIO-1, Sequoia Ecological Consulting (Sequoia) biologists performed a desktop review of project-specific biological resources and conducted a reconnaissance-level survey of the project area on March 23, 2023, to identify and document sensitive natural communities, habitat types, and potential sensitive resources. During the survey, habitat suitability determinations were made for the potential special-status plant and wildlife species listed in Attachment D.1: Sensitive Species Tables.

#### Identification of Sensitive Habitats with Potential to Occur

Habitat types and the presence of sensitive natural communities were examined by reviewing all available habitat data and ground-truthing in the field, including habitat alliance descriptions in *A Manual of California Vegetation* (CNPS 2022b). The California Department of Fish and Wildlife's (CDFW) Vegetation Classification and Mapping Program (VegCAMP) (CDFW 2013) was reviewed for sensitive natural community data. The VegCAMP data for Marin County is not yet complete and has no overlap with the project area; however, data from a second VegCAMP database, focused on MCOSED lands in Marin County, overlapped with 52 percent of the project area. This database was produced in 2008 and last updated in 2013 (CDFW 2013). Sequoia biologists also accessed the Golden Gate National Parks Conservancy's (GGNPC's) data for Marin County Fine Scale Vegetation Mapping that includes a habitat database encompassing 100 percent of the project area and has finer detail than the VegCAMP data (GGNPC 2021). The GGNPC database was updated in 2021. It was confirmed that habitat data was consistent between the two datasets, all sensitive habitat types represented in VegCAMP were also present in GGNPC data, and no major contradictions were present in the data. Due to the relative completeness of this dataset, GGNPC's data was utilized for habitat-type mapping. The U.S. Fish and Wildlife's (USFWS's) National Wetland Inventory (NWI) (USFWS 2023) and U.S. Department of Agriculture's (USDA's) Web Soil Survey data (USDA 2023) were also reviewed to determine presence of sensitive wetland, waterway, and serpentine soil habitats.

A series of maps delineating vegetation types and potential sensitive habitats or natural communities was prepared by overlaying habitat type data over the treatment area maps (Attachment D.2, Figures 3a through 3e). A second set of maps delineating wetlands and waterways was overlaid on these maps for fieldwork but has been reproduced here separately for clarity (see Attachment D.2, Figure 4a through Figure 4e). This habitat data was then verified and/or corrected during the field-reconnaissance-level survey using maps loaded in ESRI's FieldMaps using iPad Airs (4<sup>th</sup> generation). Habitat types were cross-referenced against

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sensitive natural communities lists maintained by CDFW and against the suitable habitats for sensitive plant and wildlife species identified in the desktop review. Field verification of habitat types focused on delineating potentially sensitive communities to Alliance groups. The entire project area was accessible during reconnaissance visits.

#### **Identification of Listed Plant and Animal Species with Potential to Occur**

Appendix BIO-3 of the PIER (Northern California Coast Section 263A, Tables 9a, 9b, 10a, 10b, and 19) was reviewed for special-status plants and wildlife that could occur within the treatment areas. Species that clearly had no potential for occurrence (e.g., crustaceans, dune-dwelling species) were excluded from considerations.

Sequoia biologists initially reviewed Tables 1a and 1b in Appendix BIO-3 of the CalVTP Final PEIR to identify species known from or with potential to occur within the Northern California Coast ecoregion and their associated California Wildlife Habitat Relationship (CWHR) types. Sensitive natural communities associated with the Northern California Coast ecoregion were also reviewed. CDFW's California Natural Diversity Database (CNDDDB) BIOS 5 (CDFW 2022) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California database (CNPS 2022) were used to identify the state and federally listed species that may be present within 3 miles of the treatment area (see Attachment D.2, Figures 1 and 2). Other databases, including eBird and iNaturalist (2022), were also queried for special-status species that are underrepresented in the CNDDDB, such as burrowing owl (*Athene cunicularia*) and white-tailed kite (*Elanus leucurus*). The search yielded 24 state and federally listed threatened, endangered, or candidate species, CDFW species of special concern and candidate species, and CNPS California Rare Plant Rank (CRPR) List 1 and List 2 species. The results also produced four plant species listed on CNPS California Rare Plant Rank (CRPR) List 3 and List 4. The species reviewed are listed below and impacts to each species are analyzed within the Biological Resources Species List (see Attachment D.1). From the complete list of species, three of the special-status plants and one of the special-status wildlife were determined to have potential to occur or are known to occur within project area (listed in Table 3-4, page 3-42). Accordingly, a biological resources survey would be conducted where applicable prior to project commencement (i.e., pre-work survey), and the appropriate agency would be notified if any rare, threatened, or endangered (RTE) species are discovered.

#### **Habitats and Sensitive Natural Communities Potentially Present**

The project area is primarily dominated by eucalyptus, grassland, and oak woodland habitat types, with significant portions of developed land. The project area is composed of the following:

- *Eucalyptus (globulus, camaldulensis)* Provisional Semi-Natural Association (49.5%)
- Developed (12%)
- *Quercus agrifolia* Alliance (9.5%)
- California Annual and Perennial Grassland (8.5%)
- *Baccharis pilularis* Alliance (8.4%)
- *Umbellularia californica* Alliance Native Forest (7.7%)

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- Shrub fragment (1.1%)

Several other habitat types were present but represent less than 1 percent of the total project area, including forest fragment, *Sequoia sempervirens* Alliance, Evergreen Hardwood (Urban Window), *Acacia* spp. – *Grevillea* spp. – *Leptospermum laevigatum* Semi-Natural Alliance, and *Genista monspessulana* Semi-Natural Association.

Of these habitat types, four are considered sensitive by CDFW, ranked S3 through S5 or G3 through G5, as shown in Table 3-3, below. Sensitive habitat spatial mapping is available for review in Attachment D.2, Figures 3a through 3p. A breakdown of sensitive habitat types and ranking found within the project area is shown below in Table 3-3. All habitat types are listed in Table 2-4 (page 2-5).

**Table 3-3 Sensitive Habitat Types Mapped within the Project Footprint**

Habitat subgroup	Habitat type	Acreage	Percent cover mapped in project footprint	CDFW sensitivity ranking
Native forest	<i>Quercus agrifolia</i> Alliance	15.1	9.5%	G5, S4
Native forest	<i>Sequoia sempervirens</i> Alliance	1.2	<1%	G3, S3: sensitive
Native forest	<i>Umbellularia californica</i> Alliance	12.3	7.7%	G4, S3: sensitive
Native shrub	<i>Baccharis pilularis</i> Alliance	13.4	8.4%	G5, S5

Notes:

G3 S3: Vulnerable worldwide/statewide

G4 S4: Apparently secure worldwide/statewide

G5 S5: Demonstrably secure because of its worldwide/statewide abundance

#### Special-status Plants and Animals with Potential to Occur

Attachment D includes a list of special-status species with potential to occur within the project area, based on the SPR BIO-1 requirement for a data review of biological resources, as previously described. Table 34 and, below, provides the final list of special-status plant and wildlife species with potential to occur within the treatment area based on the data review and reconnaissance-level survey. Full tables that include species that were ruled out and the justification for such are provided in Attachment D.1.

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**Table 3-4 Special-Status Wildlife with Potential to Occur within the Project Footprint**

Species	Federal Listing	State Listing	Habitat	Potential for occurrence
Pallid bat ( <i>Antrozous pallidus</i> )	none	SSC	The pallid bat roosts in large diameter trees and abandoned buildings.	Moderate; suitable habitat is present in project area, and one occurrence is documented near the project area.
Western bumble bee <sup>a</sup> ( <i>bombus occidentalis</i> )	none	CC	Associated with a variety of flowering plants and crops within open coniferous, deciduous, and mixed-woodland forests and wet and dry meadows. Is capable of foraging in cold, rainy weather conditions and commonly nests underground.	Low; potentially suitable habitat is present in project area, and one historic occurrence is documented near the project area.
Western pond turtle ( <i>Emys marmorata</i> )	none	SSC	Western pond turtles use upland and aquatic habitat in and around freshwater ponds and streams. This species nests in leaves or soil upland from water bodies in flat areas with short vegetation and dry soil.	Low; drainages within the project area not anticipated to be suitable habitat for species. No habitat connectivity for species from area with known occurrences.
Northern spotted owl ( <i>Strix occidentalis caurina</i> )	FT	CT	Northern spotted owls live in forests characterized by dense canopies of mature trees, abundant logs, and standing snags. They prefer to nest in mature forest stands with multi-layered canopies and open space among the lower branches to allow for foraging and dispersal.	Low; suitable habitat is not present in project area, but species occurs within 1 mile of the project area.

Notes:

FT: federally listed threatened species

CT: California State threatened

SSC: California State Species of Special Concern

CC: California state candidate species

<sup>a</sup> Western bumble bee was included in previous MWPA assessments as CC. The CNDDDB has been listing this species as a California state candidate for listing through September 2021 even though the species lost its candidate status in November 2020. This legal decision is being challenged. We included this species in part to maintain consistency with past project analysis and because the species status may change between now and implementation of the proposed project.

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**Table 3-5 Special-Status Plant Species with Potential to Occur within the Project Footprint**

Species	Federal Listing	State Listing	CNPS	Habitat	Potential for occurrence
Franciscan Onion ( <i>Allium peninsulare</i> var. <i>franciscanum</i> )	none	none	CNPS 1B.2	Cismontane woodland, valley and foothill grassland.	Low; no known occurrences near the project area.
Napa false indigo ( <i>Amorpha</i> <i>Californica</i> var. <i>Napensis</i> )	none	none	CNPS 1B.2	Wetland, riparian woodland, broad-leafed upland forest (openings), chaparral, cismontane woodland	Low to moderate; suitable habitat is present within project area; known occurrences are found near the project area.
Bent-flowered fiddleneck ( <i>Amsinckia lunaris</i> )	none	none	CNPS 1B.2	Cismontane woodland, coastal bluff scrub, valley and foothill grassland, serpentine, gravelly slopes	Low to moderate; known occurrences and suitable habitat are found within the project buffer area.
Mt. Tamalpais manzanita ( <i>Arctostaphylos montana</i> ssp. <i>montana</i> )	none	none	CNPS 1B.3	This perennial evergreen shrub is found in chaparral and valley grassland.	Low; no known occurrences in project area. Nearest occurrences are on slopes and grasslands of Mt. Tamalpais.
Marin Manzanita ( <i>Arctostaphylos virgata</i> )	none	none	CNPS 1B.2	Broad-leafed upland forest, chaparral, closed-cone coniferous forest, north coast coniferous forest	Low; project area is outside of known range of species, and there are no known occurrences within project area.
Oakland star-tulip ( <i>Calochortus umbellatus</i> )	none	none	CNPS 4.2	Broad-leafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland	Low; no known occurrences near the project area; suitable habitat is present within the project area.
Western leatherwood ( <i>Dirca occidentalis</i> )	none	none	CNPS 1B.2	Broad-leafed upland forest, chaparral, cismontane woodland, closed-cone coniferous forest, north coast coniferous forest, riparian forest, riparian woodland	Low; no known occurrences near the project area; potentially suitable habitat is present in project area.

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Species	Federal Listing	State Listing	CNPS	Habitat	Potential for occurrence
Tiburon buckwheat ( <i>Eriogonum luteolum</i> var. <i>Caninum</i> )	none	none	CNPS 1B.2	Chaparral, coastal prairie, valley grassland, serpentine endemic	Low to moderate; known occurrences and suitable habitat are found near the project area, but not within the project area.
Minute pocket moss ( <i>Fissidens pauperculus</i> )	none	none	CNPS 1B.2	Seasonally moist hard-packed soils on steep faces, gullies, or cut banks	Low; no known occurrences near project area; suitable habitat is not present in the project area.
Fragrant fritillary ( <i>Fritillaria liliacea</i> )	none	none	CNPS 1B.2	Cismontane woodland, coastal prairie, coastal scrub, valley and foothill grassland	Low; no known occurrences are found near the project area; potentially suitable habitat is present in the project area.
Congested-headed hayfield tarplant ( <i>Hemizonia congesta</i> ssp. <i>congesta</i> )	none	none	CNPS 1B.2	Northern coastal scrub, valley grassland	Low; potentially suitable habitat is present within project area.
Marin western flax ( <i>Hesperolinon congestum</i> )	FT	CT	CNPS 1B.1	Chaparral, serpentine, valley and foothill grassland	Low; no known occurrences are found near project area; potentially suitable habitat is present within project area.
Santa Cruz tarplant ( <i>Holocarpha macradenia</i> )	FT	CE	CNPS 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland; clay soil	Low; one known record was found near project area; no suitable habitat is found in project area.
Harlequin lotus ( <i>Hosackia gracilis</i> )	none	none	CNPS 4.2	Broad-leafed upland forest, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, meadows and seeps, north coast coniferous forest, valley and foothill grassland	Low; no known occurrences are found near the project area; suitable habitat is not present in project area.
Small groundcone ( <i>Kopsiopsis hookeri</i> )	none	none	CNPS 2B.3	North coast coniferous forest, open woodland, mixed conifer forest.	Low; one known occurrence within 3 miles of project area; suitable habitat is not present within project area.

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Species	Federal Listing	State Listing	CNPS	Habitat	Potential for occurrence
Bristly leptosiphon ( <i>Leptosiphon aureus</i> )	none	none	CNPS 4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland	Low; several occurrences are found near the project area; potentially suitable habitat is found within project area.
Woolly-headed lessingia ( <i>Lessingia hololeuca</i> )	none	none	CNPS 3	Broad-leafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland	Low; no known occurrences are found near the project area; potentially suitable habitat is found within project area.
Tamalpais lessingia ( <i>Lessingia micradenia</i> var. <i>micradenia</i> )	none	none	CNPS 1B.2	Chaparral, valley, and foothill grassland / thin, gravelly soil of serpentine outcrops, roadcuts	Low; known occurrences and suitable habitat are found near the project area, but species is only known from Mt. Tamalpais.
Tamalpais oak ( <i>Quercus parvula</i> var. <i>tamalpaisensis</i> )	none	none	CNPS 1B.3	Understory conifer woodland	Low; known occurrences and suitable habitat are found near the project area; but species is only known from Mt. Tamalpais.
Mt. Tamalpais bristly jewelflower ( <i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i> )	none	none	CNPS 1B.2	Chaparral, valley grassland, serpentine	Low; several known occurrences are found near the project area; potentially suitable habitat is found within project area.

Notes:

FE: federally listed endangered species

CE: California State endangered

CNPS: California Native Plant Society Ranks 1B; plant species rare or endangered in California and elsewhere (not protected under ESA or CESA)

- 0.1: seriously threatened in California (over 80 percent of occurrences threatened; high degree and immediacy of threat)
- 0.2: moderately threatened in California (20 percent to 80 percent of occurrences are threatened; moderate degree and immediacy of threat)

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#### Impact BIO-1

The proposed project would involve initial treatment and maintenance of WUI fuels reduction areas. Work would focus on treatment of exotic, invasive, and fire-hazardous vegetation mostly through the removal of eucalyptus; healthy, mature, native trees would not be removed as a part of the proposed project. Treatments would consist primarily of the use of handheld and ground-based mechanical equipment to facilitate cutting of eucalyptus but also of other methods including targeted herbicide application, vegetation pulling, prescribed herbivory for maintenance of scrub and grasslands, and hand pulling of invasive vegetation. Vegetative debris may be cut and scattered in place, chipped, and/or hauled off site. Pile burning, air curtain burners, kiln burners, and carbonators may also be utilized to facilitate biomass disposal.

Special-status plant species are listed in Table 3-4 (page 3-42). Overall, special-status plant occurrences documented within 3 miles of the project area are concentrated along the southwestern boundary. Some of the sensitive species that were reviewed are associated with or are endemic to serpentine soils, which occur over a mile to the north of the project area near the Terra Linda/Sleepy Hollow Divide (Attachment D.2, Figure 7). Areas of potential habitat have been mapped in detail to facilitate identification of areas for pre-work surveys.

Manual and mechanical vegetation removal, pile burning, prescribed herbivory, and herbicide application could result in direct or indirect adverse effects to special-status plant species. The project area contains known occurrences of sensitive plant species as well as potentially suitable habitat for some sensitive plant species (see Table 33, page 3-41). The potential for adverse effects to special-status plant species is within the scope of the activities and impacts addressed in the CalVTP PEIR because the activities and level of disturbance resulting from implementing treatment activities are consistent with those analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 3.6-131–3.6-138). While vegetation treatment activities may directly or indirectly impact special-status plant species, the removal of eucalyptus species could promote the regeneration of native species that support a healthier forest. Additionally, wildfire hazards and the risk of catastrophic stand-replacing wildfires, which may threaten sensitive plant populations, may be reduced. An analysis of potential impacts on each special-status plant species known to occur within 3 miles of the project area has been performed (refer to Attachment D and Table 34 for details).

Applicable SPRs include the following:

- Biological resources would be reviewed and surveyed (SPR BIO-1).
- Crew members and contractors would be trained in applicable biological resources (SPR BIO-2).
- Protocol-level surveys for special-status plants in areas identified during SPR BIO-1 as suitable habitat for special-status plant species where adverse effects from the proposed project cannot be clearly avoided (SPR BIO-7). Protocol-level surveys for special-status plants would not be required if adverse effects could be

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clearly avoided, such as the target special-status plant species being an herbaceous annual, stump-sprouting species, or geophyte species, and if the treatment may be carried out during the dormant season for that species or when the species has completed its annual life cycle, provided the treatment would not alter habitat in a way that would make it unsuitable for the special-status plants to reestablish following treatment or destroy seeds, stumps, or roots, rhizomes, bulbs, and other underground parts of special-status plants.

- Invasive species spread would be prevented (SPR BIO-9).
- Disturbance would be suspended during heavy precipitation (SPR GEO-1).
- Soil areas disturbed by mechanical treatments, prescribed herbivory, and prescribed (pile) burns that exhibit bare soil over 50 percent or more of the treatment area would be stabilized with mulch or organic matter produced from mastication (SPR GEO-3).
- Erosion would be monitored by the project proponent through an inspection for proper implementation of applicable SPRs and mitigations prior to the rainy season and an inspection of the treated areas for evidence of erosion after the first large storm or rainfall event (SPR GEO-4).
- Compacted treatment areas would be drained via water breaks (SPR GEO-5).
- Erosion would be minimized through heavy equipment and slope limitations (SPR GEO-7).
- Herbicide application would not occur within protective buffers for special-status plants to prevent drift and non-target application (SPR HAZ-5).

Impacts could be potentially significant, even with implementation of the SPRs, per the CalVTP PEIR. Therefore, MMs BIO-1a and BIO-1b would be required where sensitive species are known to occur due to protocol level surveys required per SPR BIO-7. Per MM BIO-1a and MM BIO-1b, if special-status plants were identified during protocol-level surveys, a no-disturbance buffer of at least 50 feet would be established around the area occupied by the species within which treatment would not occur unless treatment could be completed outside the growing period for sensitive annual and geophyte species (i.e., in the dormant season) and would not damage the stump, root system, or other underground parts of special-status plants or destroy the seedbank, or should a qualified biologist determine that the species would benefit from treatment in the occupied habitat area. Table 3-4 (page 3-42) lists the geophytic, stump-sprouting, or annual species for which effects could be avoided so long as work occurs outside the growing season or during the dormant season. With implementation of the SPRs and MMs listed above, including survey protocols and trainings, impacts to special-status plant species would be less than significant. The impact would be within the scope of the PEIR (Section 3.6, page 138) because the treatment activities and intensity would be consistent with those analyzed in the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, general habitat characteristics are essentially the same within and outside the treatable landscape (e.g., no resource would be affected outside the treatable

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landscape that would not be similarly affected within the treatable landscape). Therefore, the potential impact on special-status plants would also be the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Including air curtain burning, kiln burning, and carbonators as a potential treatment would not change the types of direct or indirect impacts to special-status plant species. If an aboveground structure were used for air curtain burning, kiln burning, or carbonators, the equipment would remain on already disturbed lands or pavement and would not impact special-status plant species. Impacts would be the same as described in the PEIR.

#### **Impact BIO-2**

##### **Summary of Impacts and Relevant SPRs and MMs**

Manual and mechanical vegetation removal, pile burning, targeted herbicide application, and prescribed herbivory have the potential to result in direct or indirect adverse effects to special-status wildlife species or habitat. The project area contains known occurrences of sensitive wildlife species as well as potentially suitable habitat for some sensitive wildlife species (as listed in Table 3-4, page 3-42). The potential impacts on special-status wildlife and suitable habitat are within the scope of the PEIR because the treatment activities and intensity are consistent with those analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 3.6-138–3.6-184).

Hand and mechanical treatments, herbivory, pile burning, and herbicide application would result in reduced eucalyptus stands and understory vegetation that may modify habitats for some special-status species; however, these treatments would promote a healthier, native forest habitat. SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-8, BIO-9, BIO-10, BIO-11, HAZ-5, HAZ-6, HYD-1, HYD-2, HYD-3, HYD-4, and HYD-5 would be implemented to minimize impacts.

Applicable SPRs not already described under Impact BIO-1 include the following:

- If sensitive natural communities or habitats cannot be avoided, then a protocol-level survey would be conducted to identify and map the limits of the potentially sensitive area (SPR BIO-3).
- Treatments would be designed to avoid loss or degradation of riparian habitat function, including retaining a minimum of 75 percent overstory and 50 percent understory canopy (SPR BIO-4).
- Type conversion would be avoided and habitat function in chaparral and coastal sage scrub communities maintained through treatment design, and a minimum of 35-percent relative cover of native chaparral and coastal sage scrub communities would be retained (SPR BIO-5).
- The proposed project would not conflict with the provisions of an adopted natural community conservation plan, habitat conservation plan, or other approved plan (BIO-8).

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- Focused or protocol-level surveys would be conducted for special-status wildlife species or nursery sites with potential to be directly or indirectly affected by treatment (BIO-10).
- Wildlife fencing that is designed to minimize the chance of wildlife entanglement, allows for wildlife jump-outs, and is highly visible to wildlife would be installed (BIO-11).
- All required licensing and permitting for herbicide application would be obtained through the County Agricultural Commissioner's office (SPR HAZ-6).
- Water quality regulations, including vegetation and land-disturbance-related waste discharge requirements, would be complied with (SPR HYD-1).
- Construction of new roads would be avoided (HYD-2).
- Water quality protection for prescribed herbivory would be ensured (HYD-3).
- Watercourse and lake protection zones would be identified and protected (SPR HYD-4).
- Non-target vegetation and special-status species would be protected from herbicides (SPR HYD-5).

According to the CNDDDB BIOS search, no special-status wildlife species are known to occur within the project area. The pallid bat (*Antrozous pallidus*) has a moderate potential to occur within the project area. There is suitable raptor nesting habitat in the project area.

#### **Impacts to Northern Spotted Owls**

During the reconnaissance surveys, biologists determined that nesting habitat for northern spotted owl is not present in the project area. One historic nest, however, is present within 1 mile of the western boundary of the project area.

Manual and mechanical removal of eucalyptus and pile burning or other biomass treatment activities could indirectly impact nesting northern spotted owls if nesting is adjacent the work areas. Since nesting is not anticipated within the project area, direct impacts to nests would not occur. Use of heavy equipment could temporarily elevate noise levels in areas surrounding the work zone. Should nesting occur near but outside the work zone, depending on the timing and magnitude of the related noise, nesting by northern spotted owl could be disrupted. Human activities conducted within the visual line of sight of a nest could also disturb nesting activities. Smoke from pile burns or other biomass treatments could also impact nesting behavior if it were to occur in close enough proximity to active nests outside the project area. Vegetation management activities could result in one or more of the above conditions while nesting is occurring, indirectly resulting in disruption of breeding and nesting or abandonment of active nests.

USFWS has provided guidance in determining if project-related noise and activities could result in the disturbance of a northern spotted owl nest and result in "take." Noise and visual disturbance may reach the level of take when at least one of the following conditions is met (USFWS 2020):

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- Project-generated sound exceeds ambient nesting conditions by 20 to 25 decibels (dB)
- Project-generated sound, when added to existing ambient conditions, exceeds 90 dB
- Human activities occur within a visual line-of-sight distance of 330 feet or less from a nest

SPR BIO-10 requires focused surveys when working in habitats, which includes work conducted in spotted owl habitat near known nesting sites. SPR BIO-2 would require staff training prior to work. These measures would allow for the identification of any nesting pairs in close proximity to work zones and, thus, the avoidance of noise disturbance within the nesting seasons (February 1 through July 31) (CCR Title 14 § 895) where work could result in take. These measures would reduce impacts to nesting northern spotted owl.

Some minimal potential foraging habitat was present in the project area. MM BIO-2a would apply to areas where foraging habitat suitable for northern spotted owl was identified during reconnaissance surveys. MM BIO-2a requires that habitat function be maintained for northern spotted owl following guidance for the species, with specific requirements for high canopy cover. In tree canopy areas where existing suitable foraging habitat is present, canopy would be retained at a percentage preferred by the species. Implementation of MM BIO-2a would ensure impacts to foraging habitat are minimized to less than significant levels by maintaining foraging habitat functions.

In addition to forest structure, habitat suitability is influenced by the availability of prey, presence of competitor species, risk of predation, and availability of suitable nesting locations (Lesmeister 2018). Some vegetation management activities would involve removal of woody debris, which could result in destruction of woodrat nests, the main prey of the northern spotted owl. Given the relatively small area of the WUI fuels reduction areas compared with the wildland hunting areas available to woodrats, impacts to northern spotted owl prey base would be minimal and less than significant.

The proposed treatments would likely have a beneficial effect to northern spotted owl in the long term if they reduce future losses of ecosystem structure from catastrophic wildfire and succession or better incorporate future disturbance events to improve overall forest ecosystem resilience to climate change (Ager, et al. 2007, Spies, et al. 2010).

#### **Impacts to Special-status Bats**

One bat species, pallid bat, may potentially occur in the project area. Suitable large-diameter trees were observed in some locations on site. Loud mechanical equipment used for treatment could indirectly impact bat species using buildings or structures in the area. Tree removal activities could impact colonial bat species such as the pallid bat, which select a variety of trees and roost features, including cavities, crevices, and deep fissures in the wood or bark of a tree and exfoliating bark. Smoke from pile burning could also indirectly impact roosting bats by disturbing them during sleep, breeding, or hibernation. Depending on the species present, the size of the roost, the type of roost (e.g., maternity, day, night, hibernation) and the season when

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tree removal would occur, the removal of trees could affect bats through removal of the roost and injury to bats. SPR BIO-10 requires focused surveys when working in habitats, which includes work conducted in potential habitat for roosting bats, during maternity roosting season (March 1 to July 31). SPR BIO-2 would require staff training prior to work. Impacts could still be significant. MMs BIO-2a and BIO-2b would be implemented, as previously described, to avoid impacts to these species and to monitor during work, if the species is found to occur. Impacts would be less than significant with mitigation, consistent with the PEIR.

#### **Impacts to Special-status, Migratory, and Nesting Birds**

One special-status bird species (refer to Table 3-4, page 3-42)) as well as migratory and nesting birds have the potential to occur within the project area and/or surrounding area. Migratory birds and birds of prey are protected under the Migratory Bird Treaty Act and sections 3503 and 3503.5 of the California Fish and Game Code.

Quality ground, shrub, and tree nesting habitats were observed throughout the project area during reconnaissance-level surveys, and common nesting birds are expected to occur. Tree removal activities could impact nesting birds, which use cavities, snags, trees, and wood debris as nesting habitat. Nesting bird species, including special-status species nesting in nearby habitats, could be alarmed by noise from mechanical equipment operation and the presence of workers that could result in nest abandonment and failure. Prescribed herbivory would not be likely to result in the direct loss of nest trees or cavities, as herbivores target understory herbaceous or woody vegetation. Pile burning could result in adverse effects to nesting birds if ground and shrub nesters were nearby.

SPR BIO-10 requires focused surveys when working in suitable special-status species habitats. SPR BIO-2 would require staff training prior to work. Per SPR BIO-12, treatment activities would be scheduled to avoid active nesting season of nesting bird and raptor species. The active nesting season would be defined by a qualified RPF or biologist. If treatment activities cannot be scheduled to fully avoid the active nesting season, a survey for common nesting birds would be conducted by a qualified RPF or biologist, as described in SPR BIO-12. If an active nest is detected, disturbance to the nest would be avoided by establishing an appropriate buffer around the nest, modifying treatments to avoid disturbance to the nest, or deferring treatment until the nest is no longer active. These measures would allow for the identification of any nesting birds in close proximity to work zones. Impacts could still be significant to special-status bird species. MM BIO-2a and MM BIO-2b, which require avoidance and/or monitoring of special-status individuals, including nests, would also apply. Impacts would be less than significant with implementation of these measures, consistent with the PEIR.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, general habitat characteristics are essentially the same within and outside the treatable landscape because the areas are adjacent, have similar vegetation, and would potentially impact the same types of sensitive wildlife. Therefore, the potential impact to special-status wildlife would be the same, as described above. This determination is consistent

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with the PEIR—less than significant with the SPRs and mitigation previously identified—and would not constitute a substantially more significant impact than what was analyzed in the PEIR.

Including air curtain burning, kiln burning, and carbonators as a potential treatment would not change the types of direct or indirect impacts to special-status wildlife species. If an aboveground structure were used for air curtain burning, kiln burning, and carbonators, the equipment would remain on already disturbed lands or pavement and would not impact special-status wildlife species or their habitat and would have similar impacts due to smoke as with pile burning with appropriate SPRs and mitigation measures. Impacts would be the same as described in the PEIR.

#### **Impact BIO-3**

##### **Summary of Impacts and Relevant SPRs and MMs**

Manual and mechanical vegetation removal, pile burning, or other biomass treatment, prescribed herbivory, and herbicide application could result in direct or indirect adverse effects to sensitive habitats, including designated sensitive natural communities and oak woodlands. The project area contains several sensitive habitat types (as listed in Table 3-3, page 3-41)). The potential for treatment activities to result in adverse effects to sensitive habitats was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, page 71). The potential for adverse effects to sensitive habitats is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and level of disturbance as a result of the treatment activities are consistent with those analyzed in the PEIR. The SPRs that apply to this impact are SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-9, and HYD-4. MM BIO-3a would also apply and requires the determination of the fire return interval for the specific natural community type or alliance and the design of treatments to restore the natural fire regime and return vegetation composition to its natural condition. MM BIO-3a also requires avoidance of vegetation treatments in sensitive natural communities with rarity ranks S1 and S2 and that no more than 20 percent of the native vegetation cover be removed by fuel treatments in sensitive natural community vegetation with rarity rank S3 or in oak woodlands.

Applicable SPRs not already described in Impact BIO-1 and Impact BIO-2 include the following:

- Treatment would be implemented to minimize soil disturbance and prevent the spread of plant pathogens including *Phytophthora* (SPR BIO-6).

SPR BIO-3 requires a survey for sensitive vegetation communities prior to treatment to ensure these are identified and treatment avoids these communities. Implementation of SPR BIO-1 and the survey required under SPR BIO-3 would ensure any riparian habitat, sensitive communities, or oak woodlands would be identified. If any riparian habitat occurs, SPR BIO-4 would ensure that treatment is designed to avoid or minimize impacts to these areas. SPR BIO-5 would ensure that treatment is designed to maintain or enhance habitat function of chaparral and coastal sage scrub communities; SPR BIO-6 requires that best management practices be followed to avoid

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spread of plant pathogens; and SPR BIO-9 prescribes actions to prevent the spread of invasive plants.

Review of the GGNPC habitat data resulted in identification of four sensitive habitat types within the project area, as listed in Table 3-3 (CDFW 2022). These sensitive habitat types represent a total of 26.4 percent of the project area. A small quantity of chaparral habitat was found to be present in the project area, and neither chaparral habitat alliances are considered sensitive with a S3 or S2 rank (CNPS 2022).

#### **Coastal Scrub and Chaparral**

The project area contains chaparral communities defined as northern mixed chaparral in the Manual of California Vegetation (see Table 3-3, page 3-41) (CNPS 2022). No coastal scrub was identified in the project area.

The majority of the chaparral communities are characterized as *Baccharis pilularis* Alliance habitat types. These habitats have a fire return interval with a mean of 76 years, with a 20 to 120 year mean minimum and maximum, respectively (Van de Water and Safford 2011). Chaparral is generally considered a fire-adapted community. In the absence of wildfires and grazing, *Baccharis pilularis* readily invades grassland habitats on the California coast (Kidder 2015). The lack of recent wildfires within the project area appears to have influenced gradual conversion of previously existing grassland habitat into chaparral habitat types through the encroachment of *Baccharis pilularis* species. The natural fire regime would not be immediately restored by this treatment, but characteristics of fire, predominantly the regenerative action following vegetation treatment and removal of small encroaching non-native vegetation, would be conducted through hand and mechanical removal of understory vegetation, dead, dying, and diseased trees, and select eucalyptus trees to create a fuels reduction area that would promote the health and resiliency of the chaparral habitat.

Implementation of SPR BIO-5 ensures treatment in chaparral would be conducted to retain a minimum of 35 percent of the native vegetation cover. Treatment activities in chaparral would promote heterogeneity, resiliency, and health in the residual stand by creating different influences of sunlight to this vegetative type, adding to a mosaic of diversity. The mosaic pattern of vegetation would retain suitable habitat for wildlife and reduce the potential for erosion following treatments. SPR BIO-9 would ensure no significant spread of invasive species from treatment activities. Impacts to this community would be less than significant, consistent with the PEIR.

#### **Oak Woodlands**

According to GGNPC and VegCAMP vegetation data (GGNPC 2021; CDFW 2013), in combination with data ground-truthing during reconnaissance-level surveys, there are approximately 15.1 acres of oak woodland present in the project area, representing 9.5 percent of the total project area. The dominant Alliance type is *Quercus agrifolia* Alliance.

Manual and mechanical vegetation removal, pile burning, targeted herbicide application, and prescribed herbivory may occur in sensitive oak communities. The proposed treatments would

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occur within coastal oak woodlands that are outside of their natural fire regime, defined as short to medium interval, or approximately 5 to 45 years. The natural fire regime has not been maintained in the project area, and it would not be immediately restored by this treatment; however, characteristics of fire—predominantly, the regenerative action following vegetation treatments and ladder fuel alteration—would be emulated through removal of understory vegetation, select live trees, and dead, dying, and diseased trees to create a shaded fuel break that would promote the health and resiliency of the residual stand.

Treatment activities have the potential to result in degradation or alteration of sensitive oak communities. Due to the presence of sensitive oak woodland communities, MM BIO-3a applies to the proposed project. Implementation of MM BIO-3a requires the determination of the fire-return interval for the specific natural community type or Alliance and the design of treatments to restore the natural fire regime and return vegetation compositions to their natural condition. MM BIO-3a also requires avoidance of fuel breaks in sensitive natural vegetation communities with rarity ranks S1 and S2 and that no more than 20 percent of the native vegetation cover be removed by fuel breaks in sensitive natural vegetation communities with rarity rank S3 or in oak woodlands.

Many areas in Marin County are affected by *sudden oak death* (SOD) and other forest diseases. Treatment would be implemented to minimize soil disturbance and prevent the spread of plant pathogens, including *Phytophthora*, in accordance with SPR BIO-6 to ensure less-than-significant effects to oak woodlands from spread of SOD. SPR BIO-9 would minimize impacts from the spread of invasive species.

With implementation of MM BIO-3a, oak woodland treatment would target understory vegetation, and at least 80 percent of the native vegetation upper canopy cover would be maintained. In treatment areas where multiple age classes are represented, the proposed treatment would promote heterogeneity, resiliency, and health in the residual stand by creating different influences of sunlight through the canopy to the forest floor. Adding to a mosaic of diversity in the understory. No S1 or S2 oak communities were documented during the desktop or field review of the project area; if these were discovered during the course of work, no treatment would occur within S1 or S2 communities. Treatment focused on eucalyptus would ensure retention of overall oak woodland habitat cover; therefore, loss of oak woodlands is not anticipated.

#### **Redwood Forest**

According to GGNPC vegetation data, in combination with data ground-truthed during reconnaissance-level surveys, there are approximately 1.2 acres of redwood forest habitat present in the project footprint, representing 0.7 percent of the total project area. The dominant Alliance group identified in the redwood forest habitat is *Sequoia sempervirens* (CDFW 2013, GGNPC 2021):

In the project area, the entire 1.2 total acres of redwood forest qualify as rank S3. The fire regime in the redwood forest observed in the proposed project area during reconnaissance-level

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surveys is far outside the natural fire return intervals. The mean fire return interval for redwood forest is widely variable based on site conditions and may be very different today from what was historically the case prior to European-American settlements. The ability of redwood forests to withstand fire increases with age, further complicating the fire return interval question. Redwood stands observed on site generally appeared to be relatively young, and young redwood stands are thought to have a fire return interval of 6 to 27 years (Stephens and Fry 2005).

The natural fire regime has not been maintained in the project area, and it would not be immediately restored by this treatment, but characteristics of fire—predominantly, the regenerative action following vegetation treatments and ladder fuel alteration—would be emulated through removal of select eucalyptus trees and dead, dying, and diseased trees to create a fuels reduction area that would promote the health and resiliency of the residual redwood stand.

SPR-9 would ensure no significant spread of invasive species that could impact this community. Due to the sensitivity of this community, impacts could still be significant, depending on intensity of treatments. With implementation of MM BIO-3a, redwood forest treatment would target understory vegetation, and approximately 80 percent of the native vegetation upper canopy cover would be maintained. In treatment areas where multiple age classes are represented, the proposed project would promote heterogeneity, resiliency, and health in the residual stand by creating different influences of sunlight through the canopy to the forest floor, adding to a mosaic of diversity in the understory. Treatment would generally focus on vegetative understory and the removal of invasive species, dead and dying vegetation, and small-diameter, fire-hazardous trees. Mature, healthy redwoods would not be removed, ensuring retention of redwood forest habitat cover; therefore, loss of redwood forest sensitive habitats is not anticipated. Impacts would be less than significant with mitigation, consistent with the PEIR.

#### **Other Sensitive Natural Communities – Other Hardwood Forests**

An assessment of GGNPC and VegCAMP data, in combination with data ground-truthed during reconnaissance-level surveys, returned in a total of 12.4 acres of “other” hardwood forests. The majority of these are characterized as *Umbellularia californica* Alliance (CDFW 2013; GGNPC 2021). These Alliance groups are associated with a variety of habitat conditions, but they all generally occur on the landscape in small patches within larger areas of oak woodland. All of these hardwood habitat Alliances are characterized as rank S3 in the Manual of California Vegetation (CNPS 2022). Vegetation treatments could alter or damage sensitive hardwood forest communities. SPRs to minimize effects from forest diseases (SPR-7) and invasive species (SPR-9) would apply. Impacts could still be significant given the sensitivity of these communities. On this account, MM BIO-3a would apply to these areas to limit native vegetation cover removal to 20 percent or less. Impacts would be less than significant with mitigation, consistent with the PEIR.

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#### **Riparian Habitat**

Treatment activities may occur in riparian habitat. The treatment activities and their potential to impact wetlands were assessed in the PEIR (CalVTP Final PEIR Volume II Section 3.6, page 189). Treatment in riparian habitats would generally be light and focus on invasive species removal, hand thinning, and removal of dead and dying vegetation. Removal of dead and dying vegetation, invasive plants, and excess understory vegetation growth can also have beneficial effects and can improve riparian habitat health. Drainages are mapped within the proposed burn areas; however, riparian habitat was not observed during the reconnaissance survey of these areas. Riparian corridors were observed in other portions of the project area during reconnaissance surveys. Activities conducted within a riparian corridor would be conducted so as to avoid alteration to a bed, channel, or bank of a waterway, and all debris, including sawdust, chips, or other vegetative material, would be prevented from entering the bed, channel, or bank of a waterway unless a permit from the California Department of Fish and Game is obtained under section 1600 of the California Fish and Game Code. Treatment activities would be designed to avoid the loss or degradation of riparian habitat (SPR BIO-4). SPR BIO-9 would minimize potential for invasive species spread in riparian areas. In addition, MM BIO-3c would minimize impacts to riparian habitat by compensating for any unavoidable loss of riparian habitat. With implementation of the SPRs and the mitigation measure described above, impacts to riparian habitats from treatment activities would be less than significant with mitigation incorporated. The proposed treatment activities are therefore within the scope of the PEIR.

#### **Impacts of the Project Outside the Treatable Landscape and Biomass Treatments**

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, general habitat characteristics are essentially the same within and outside the treatable landscape because the areas are all adjacent to each other and the same sensitive habitats are found in both. Therefore, the potential impact to sensitive habitats is also the same, as described above, and would be less than significant with implementation of the previously identified SPRs and mitigation. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Including air curtain burning, kiln burning, and carbonators as a potential treatment would not change the types of direct or indirect impacts to sensitive habitats compared with the treatments identified in the PEIR. If an aboveground structure is used for air curtain burning, kiln burning, or carbonators, the equipment would remain on already disturbed lands or pavement and would not impact sensitive habitat. Impacts would be no greater than as described in the PEIR.

#### **Impact BIO-4**

Mechanical and hand treatments, pile burning, prescribed herbivory, and herbicide application have the potential to adversely impact wetlands if work occurs in these areas. The treatment activities and their potential to impact wetlands was assessed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, page 193). Wetted areas tend to pose fewer risks during a wildfire, and,

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on this account, work would generally be much lighter in these areas, focused predominantly on invasive species removal. Wetland habitat was observed in the work area during reconnaissance surveys. Maps of wetland and stream areas based on the National Wetlands Inventory are shown in Attachment D. Removal of invasive species through mechanical and manual methods would be beneficial as it would allow revegetation by native wetland species. No fill or discharge of fill material into waters of the U.S. or the state would occur as part of the proposed project. No work would occur in *watercourse and lake protection zones*, see Section 3.10, Hydrology. Work could also generate erosion that could influence wetland habitats. Implementation of water quality protections in accordance with SPR HYD-1 and delineation and avoidance of state and federally protected wetlands, per MM BIO-4, would ensure no impacts to wetlands in the identified features. In addition, SPR BIO-1 would be implemented where reconnaissance surveys have not been conducted, and the above-mentioned measures would be implemented as needed. SPR BIO-9 would minimize potential for invasive species spread in protected wetlands. With implementation of the SPRs and the mitigation measure described above, impacts to state and federally protected wetlands from the proposed project would be less than significant with mitigation incorporated. The proposed treatment activities are therefore within the scope of the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, general habitat characteristics are essentially the same within and outside the treatable landscape because the areas are all adjacent and include the same types of wetland habitat. Therefore, the potential impact on wetlands would be the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was analyzed in the PEIR.

Including air curtain burning, kiln burning, and carbonators as a potential treatment would not change the types of direct or indirect impacts to wetlands compared with the treatments identified in the PEIR. If an aboveground structure were used for air curtain burning, kiln burning, or carbonator use, the equipment would remain on already disturbed lands or pavement and would not impact wetlands and would have similar impacts due to smoke as with pile burning. Impacts would be the same as described in the PEIR.

#### **Impact BIO-5**

Mechanical and hand treatments could result in direct or indirect adverse effects on wildlife corridors. Based on the desktop review and reconnaissance survey as required by SPR BIO-1, the project area has the potential to provide essential connectivity areas for sensitive species. Habitat within the treatment area may be used for movement (e.g., mule deer migration) and protective cover for common wildlife species. Noise during work may impede some movement, but the treatment areas are near residential communities and structures, where other human disturbances are typical. Tree removal with heavy equipment and ground-disturbing activities poses the potential to impact nursery sites for native wildlife. Use of noise-generating equipment and smoke from pile burning could disturb roosting birds and bats, impeding use of nursery sites.

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The SPRs that apply to this impact are SPR BIO-1, BIO-2, BIO-4, BIO-5, BIO-10, BIO-11, and HYD-5 and are described under Impact BIO-1 and Impact BIO-2. With implementation of the SPRs, areas of intact wildlife corridors would be retained. These wildlife corridors would continue to function by connecting treatment areas to untreated landscapes, allowing for effective wildlife dispersal. Existing habitat would remain to permit movement of wildlife species. Vegetation management activities would not block or obstruct streams or creeks. Wildlife nursery sites could still be significantly impacted if not avoided. If wildlife nursery sites were identified during surveys conducted pursuant to SPR BIO-10, MM BIO-5 would apply. This mitigation measure requires that nursery habitat be marked for avoidance during treatment activities and a non-disturbance buffer be installed around the nursery site if activities are required to occur while the site is active or occupied.

Due to the history of fire suppression and dense understory vegetative growth throughout much of the project area, it is expected that wildlife corridors for some species would ultimately be improved by the treatment activities. By minimizing wildfire risk and thereby increasing protection of the forest ecosystem, the wildlife corridors, while slightly degraded in the short term, could be protected from high intensity wildfire in the future.

Implementation of the SPRs and MMs listed above would minimize changes in habitat function within treatment areas that serve as wildlife movement corridors. Impacts to migratory corridors and nursery sites would be less than significant with implementation of mitigation. The proposed treatment activities are therefore within the scope of the PEIR because they are the same as those listed in the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, general habitat characteristics are essentially the same within and outside the treatable landscape because the areas are adjacent, the vegetation is the same or similar, and the same wildlife species would use the areas as wildlife movement corridors. From the species' perspective, there would be no difference between the areas within and outside the treatable landscape. Therefore, the potential impact to wildlife movement corridors would be the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Including air curtain burning, kiln burning, and carbonators as a potential treatment would not change the types of direct or indirect impacts to wildlife corridors compared with the treatments identified in the PEIR. If an aboveground structure were used for air curtain burning, kiln burning, and carbonator use, the equipment would remain on already disturbed lands or pavement and would not impact wildlife corridors. Impacts would be the same as described in the PEIR.

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#### **Impact BIO-6**

Treatments could alter habitat for many common wildlife, such as reptiles and rodents, which could impact common wildlife species. Suitable habitat for common wildlife species is present within the project area. The potential for treatment activities to result in adverse effects to habitat and abundance of common wildlife was addressed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, page 3.6-197–3.6-198). The potential for adverse effects to common wildlife is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and level of disturbance are consistent with those analyzed in the PEIR.

Extensive areas of similar habitats occur adjacent the proposed WUI fuels reduction areas, such that substantial similar habitats would remain in surrounding areas that are available to common wildlife species during and after treatment. In addition, implementation of SPR BIO-1, SPR BIO-2, SPR BIO-3, and SPR BIO-5 would limit the loss and degradation of high-quality habitat for common species within the project area. SPR BIO-2 would require worker training in sensitive biological resources. SPR BIO-3 would ensure mapping of sensitive habitats; SPR BIO-5 would result in avoidance of type-conversion in scrub habitats. Project treatments would remove vegetation and alter habitat structure locally but would not result in permanent habitat degradation or conversion. Vegetation would be retained in a mosaic pattern in forest and shrub communities, and quality of habitat may improve in the long-term in some cases. Overall diversity and abundance of common wildlife would not substantially change in the long term. The implementation of the SPRs listed above would ensure that any impact to common wildlife would be less than significant. The treatment activities are consistent with those analyzed in the PEIR and would therefore be within the scope of the PEIR. With the implementation of the applicable SPRs, any impact to the loss of habitat or abundance of wildlife would be less than significant.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, general habitat characteristics are essentially the same within and outside the treatable landscape because the areas are adjacent and the vegetation is the same or similar. Therefore, the potential impact on common wildlife would be the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Including air curtain burning, kiln burning, and carbonators as a potential treatment would not change the types of direct or indirect impacts to common wildlife compared with the treatments identified in the PEIR. If an aboveground structure were used for air curtain burning, kiln burning, or carbonator use, the equipment would remain on already disturbed lands or pavement and would not impact common wildlife including their habitats. Impacts would be the same as described in the PEIR.

#### **Impact BIO-7**

Local policies or ordinances may apply to resources that occur within the project area, particularly the City of San Rafael, town of San Anselmo, and Marin County tree ordinances,

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with permit requirements (City of San Rafael Municipal Code Section 11.12; town of San Anselmo Municipal Code Section 4-9; Marin County Code Section 22.62.040) or noise ordinances (refer to Section 3.12.2). The potential for treatment activities to result in conflict with local policies or ordinances was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3 page 199). SPR AD-3 (Consistency with Local Plans, Policies, and Ordinances) requires that the project proponent design and implement the treatment in a manner that is consistent with applicable local plans (e.g., general plans), policies, and ordinances to the extent the project is subject to them. See Section 3.11 for more information. Impacts would be less than significant and consistent with the PEIR.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, general habitat characteristics are essentially the same within and outside the treatable landscape, and the applicable county, city, and local policies are the same because the lands inside and outside the CalVTP treatable landscape are within the same jurisdictions. Therefore, the potential impact on applicable local plans, policies, and ordinances would also be the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Including air curtain burning, kiln burning, and carbonators as a potential treatment would not change the analysis regarding conflicts with local policies or ordinances compared with the treatments identified in the PEIR. Use of air curtain burners, kiln burners, and carbonators would be substantially similar to pile burning and would require the same local policies to be considered. The impacts would be the same as described in the PEIR.

#### **Impact BIO-8**

The CalVTP recognized four Habitat Conservation Plans (HCPs) in the Northern California Coast Section (Section 3.6, page 68). The project area does not fall within the boundaries of any of the four HCPs. The proposed project does not fall under the jurisdiction of any known habitat conservation plans or natural community conservation plans (NCCPs); therefore, this impact does not apply to the treatment areas.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope for biological resources includes the treatable landscape as well as adjacent migration and movement corridors that are connected to the treatable landscape as well as the full geographic ranges of the special-status species and sensitive natural communities that occur within the treatable landscape (CalVTP Final PEIR Section 4.4.5, page 4-15 – 4-18). Because the project area outside the treatable landscape is proximate to the treatable landscape, portions outside the treatable area fall within the geographic scope identified within the PEIR. As noted in the PEIR cumulative section, SPRs would reduce the likelihood and magnitude of many potential

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adverse effects on biological resources; however, impacts would not be avoided entirely, and the cumulative impact analysis considers the residual cumulative impacts to biological resources. The PEIR recognizes a cumulative significant impact to special-status plants, special-status wildlife, sensitive natural communities, wetlands, wildlife movement corridors, and common native wildlife (CalVTP Final PEIR Section 4.4.5, page 4-15 to 4-18). The proposed project's contribution to these cumulative impacts, however, would be consistent with the analysis in the PEIR and, with implementation of SPRs and mitigation measures, the contribution of the proposed project would be less than cumulatively considerable since impacts would largely be temporary or avoided through implementation of these measures.

#### **New Biological Resource Impacts**

The proposed treatment is consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed project and determined that they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.6.1 Environmental Setting and Section 3.6.2 Regulatory Setting in Volume II of the Final PEIR). The project proponent has also determined that the inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the project area, the existing environmental and regulatory conditions pertinent to biological resources that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because the areas are adjacent, have similar vegetation and wildlife, and would fall within the same local jurisdictions. The use of an air curtain burner, kiln burner, and carbonator also constitutes a change in treatment type that is consistent with the types analyzed in the PEIR. Therefore, the impacts of the proposed project would be consistent with those considered in the PEIR. Circumstances have not changed, and the inclusion of areas outside of the CalVTP treatable landscape would not result in any new significant impacts. Therefore, no new impacts related to biological resources would occur.

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## 3.6 Geology, Soils, Paleontology, and Mineral Resources

### 3.6.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact GEO-1: Result in substantial erosion or loss of topsoil?	LTS	Impact GEO-1, pp. 3.7-26–3.7-29	yes	AD-3, AQ-3, AQ-4, GEO-1 through GEO-8, HYD-3, and HYD-4.	NA	LTS	no	yes
Impact GEO-2: Increase risk of landslide?	LTS	Impact GEO-2, pp. 3.7-29–3.7-30	yes	AD-3, AQ-3, GEO-1 through GEO-8.	NA	LTS	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New geology, soils, paleontology, and mineral resources impacts: Would the treatment result in other impacts to geology, soils, paleontology, and mineral resources that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.6.2 Discussion

##### Impact GEO-1

The project area is located in Marin County and within the geomorphic province of the Northern Coast Range, which is part of the Coastal Ranges, which extend more than 370 miles from the Transverse Ranges in the south to beyond the Oregon border to the north. The dominant rock type of this geomorphic province consists of partially metamorphosed and fractured volcanic and sedimentary rocks.

Most of the project area is underlain by Tocaloma-Saurin Association, as well as some small areas underlain with Xerorthents–Urban Land Complex (Marin County 2023). Tocaloma–Saurin Association occurs on extremely steep hills (50%–75% slope), and Xerorthents–Urban Land Complex occurs on relatively flat area (0%–9% slope). The parent material for Tocaloma–Saurin Association is residuum weathered from sandstone and shale, and Xerorthents–Urban Land Complex is earth-spread deposits.

The erosion factor of a soil indicates the susceptibility of a soil to sheet and rill erosion by water. The soil erosion factor for Tocaloma–Saurin Association is 0.32<sup>3</sup>, indicating the soil is moderately susceptible to detachment, which can produce moderate runoff (NRCS 2023).

Project treatments could potentially leave loose soil exposed to the erosive forces of rainfall and high winds, which would increase the potential for soil erosion and loss of topsoil. A Slope Analysis was completed for the project (included in Attachment E). Mechanical treatments using heavy machinery are the most likely to cause soil disturbance, which could lead to substantial erosion or loss of topsoil, especially in areas of steep slopes. Additionally, manual treatment such as extensive hand pulling of broom in the defensible space areas could also cause soil disturbance. Prescribed (pile) burning and kiln burning could increase risk of water repellency under the burn area as well as the breakdown of soil structure, which could lead to localized increases in erosion.

The potential for these treatment activities to cause substantial erosion or loss of topsoil was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.7.3, pages 3.7-26–3.7-29) and was

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<sup>3</sup> Soil erosion factor (K) is one of six factors used in the *universal soil loss equation* (USLE) and the *revised universal soil loss equation* (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

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determined to be less than significant with implementation of SPRs. SPR AD-3 requires that the treatment design be consistent with local plans, policies, and ordinances. Implementation of SPRs AQ-3 and AQ-4 requires a burn plan to be designed and implemented and for dust minimization during treatments. SPRs GEO-1 through GEO-8 require the suspension of ground disturbance during heavy precipitation, limits on use of high-ground-pressure vehicles, stabilization of disturbed soil areas, erosion monitoring, use of water breaks where appropriate, minimization of burn-pile size, and treatments on slopes greater than 50 percent to be evaluated by an RPF or geologist to determine the necessary measures to minimize effects. Under SPR GEO-7, areas with slopes of greater than 65 percent, and greater than 50 percent where erosion hazard rating is high or extreme, use of mechanical equipment would not be allowed, and any work performed would be at the discretion of fuel and vegetation management specialists and an RPF or geologist, as required under SPR GEO-8. SPR HYD-3 and SPR HYD-4 ensure water quality protections are in place for areas with prescribed herbivory and to establish watercourse protection zones. These SPRs would avoid and minimize the risk of substantial erosion and loss of topsoil and, thereby, ensure the impacts are less than significant, consistent with the PEIR findings.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. The impacts of erosion and loss of topsoil for the areas outside the treatable landscape are within the scope of the PEIR because the soil characteristics of the project area are essentially the same within and outside the CalVTP treatable landscape due to adjacency and similar soil and geology types, and the use and type of equipment and extent of vegetation removal and use of pile burning are consistent with those analyzed in the PEIR. The conditions of those areas are the same as those within the treatable landscape due to adjacency and similar soil and geology types; therefore, the potential impact related to soil erosion would be the same, as described above, and would be less than significant with implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The use of the air curtain, carbonator, and kiln burner would have fewer effects than similar methods of biomass disposal identified in the PEIR (e.g., pile burning.) Use of an air curtain, carbonator, or kiln burner would occur on already disturbed land, trails, roads, or paved areas so would not increase soil disturbance compared with pile burning. The impacts would fall within those analyzed in the PEIR and would not constitute a substantially more severe significant impact.

#### **Impact GEO-2**

A large portion of the project area is within or near areas with steep slopes (see Attachment E), which may increase the potential for destabilization, depending upon the soil conditions, geologic units, and known historic failures. The term *landslide* refers to the downslope movement of materials such as rock, soil, or fill under the direct influence of gravity. This downward movement can occur along a surface (e.g., glide plane, landslide plane, discrete slip

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surface) or without a distinct failure surface. The occurrence of landslides is due to several influences and factors related to slope stability, including slope angle, weathering, climate, water content, vegetation, overloading, erosion, earthquakes, and human-induced factors (Marin County Community Development Agency, Planning Division 2005). The project area includes areas mapped with historic landslides, including areas with few landslides and mostly landslides, see Attachment D (Marin County 2023). Historic landslides can predict where future landslides could occur. Removal of eucalyptus trees would generally leave the root systems in place; however, destabilization could occur if there is root decay, which could exacerbate landslide risk.

The potential for treatment activities to increase landslide risk was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.7.3, page 3.7-29-3.7-30) and was found to be less than significant with implementation of SPRs AD-3, AQ-3, and GEO-1 through GEO-8, described under Impact GEO-1. These SPRs would avoid and minimize the risk of landslide and, thereby, ensure the impacts are less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing environmental conditions are the same as those within the treatable landscape because of the proximity and shared slope conditions; therefore, the potential impact related to landslide risk is also the same, as previously described, and would be less than significant with the implementation of the same SPRs.

Air curtains, carbonators, and kiln burners would be used in already disturbed areas or paved areas and would not be used in areas with a 35 percent or greater incline. Air curtains, carbonators, and kiln burners enclose the fuels and pose limited-to-no potential for erosion or slope instability. No new impacts or substantially more severe significant impact than what was analyzed in the PEIR would occur from air curtain burning.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope for geology and soils is all areas where vegetation could be treated in California's geomorphic provinces (CalVTP Final PEIR Section 4.4.6, page 4-18). The inclusion of treatment areas outside the treatable landscape would expand the geographic scope for the cumulative analysis but, as with the vegetation treatment activities within the treatable landscape, potentially significant impacts to geology and soils effects would be avoided and minimized through the implementation of SPRs. As noted in the CalVTP PEIR, cumulative impacts associated with erosion and landslide related to wildfire would be more significant in areas not managed with vegetation treatment programs. Therefore, the proposed project's contribution to soil erosion or

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an increased risk of landslide would not be cumulatively considerable and would be consistent with the analysis in the PEIR.

#### **New Geology, Soils, Paleontology, and Mineral Resource Impacts**

The proposed project would be consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed project and determined that the areas are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.7.1 Environmental Setting and Section 3.7.2 Regulatory Setting in Volume II of the Final PEIR). Within the boundary of the project area, the geology and slopes of the areas outside of the treatable landscape are essentially the same as those in the treatable landscape; thus, the impacts would be the same. There are no changed circumstances present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Air curtains, carbonators, and kiln burners would be used in already disturbed areas or paved areas and would not be used in areas with a 35 percent or greater incline. Air curtains, carbonators, and kiln burners enclose the fuels and have limited-to-no potential for erosion or slope instability. No new impacts or substantially more severe significant impact than what was covered in the PEIR would occur from the additional biomass processing methods. Therefore, no new impacts related to geology and soils would occur.

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## 3.7 Greenhouse Gas Emissions

### 3.7.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact GHG-1: Conflict with applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs?	LTS	Impact GHG-1, pp. 3.8-10–3.8-11	yes	None	NA	LTS	no	yes
Impact GHG-2: Generate GHG emissions through treatment activities?	PSU	Impact GHG-2, pp. 3.8-11–3.8-17	yes	AQ-3	GHG-2	PSU	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New greenhouse gas impacts: Would the treatment result in other impacts to greenhouse gases that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.7.2 Discussion

##### Impact GHG-1

Vegetation treatments would involve manual and mechanical vegetation removal, and biomass disposal would include chipping, pile burning, air curtain burning, kiln use, and carbonator use, all of which would generate some *greenhouse gas* (GHG) emissions. Consistency of treatments under the CalVTP with applicable plans, policies, and regulations aimed at reducing GHG emissions was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.8.3, pages 3.8-10–3.8-11). The project would be consistent with the applicable policies, plans, and regulations to reduce GHG emissions as described in California’s 2017 Climate Change Scoping Plan (CARB 2017), the California Forest Carbon Plan (Climate Forest Action Team 2018), and the Draft California 2030 Natural and Working Lands Climate Change Implementation Plan (CARB 2019). It would also be consistent with the 2007 Marin Countywide Plan, which contains goals, policies, and programs relevant to GHG emission generation within the county; these aim to study the effects of climate change on fire ecology and fire hazards and use this information to prepare response strategies. Additionally, the project would be consistent with the Marin County Climate Action Plan Update 2020, which references preparation for more wildfires, including home hardening and community wildfire protection plans in unincorporated communities (Marin County 2020). It would also be consistent with the City of San Rafael and Town of San Anselmo climate action plans, which reference goals of coordinating with fire districts and relevant organizations to address the health and adaptability of natural systems to environmental hazards including fire protection (City of San Rafael 2019; Town of San Anselmo 2019). Impacts related to GHG emissions from these types of treatment activities are within the scope of the PEIR because the proposed activities as well as the associated equipment, duration of use, and resultant GHG emissions are consistent with those analyzed in the PEIR, which were found to be less than significant. SPR GHG-1 is not applicable to the proposed project as the project is not subject to the requirement to provide information to inform reporting under the Board of Forestry and Fire Protection’s Assembly Bill 1504 Carbon Inventory Process because the project is not a registered offset project.

The MWPA is participating in a local effort, called the Marin Biomass project, funded by the Governor’s Office of Planning and Research, to study potential pathways for biomass utilization in Marin County in ways that minimize GHG emissions. Recommendations resulting from this 2-year study would inform future strategies for managing biomass resulting from this and other vegetation management projects.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, the same plans, policies, and regulations adopted to reduce GHG

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emissions apply in the areas outside the treatable landscape as well as in areas within the treatable landscape; therefore, the GHG impact is also the same—less than significant—as described above.

Air curtain burners, carbonators, and kiln burners may instead be used for debris disposal, which would also emit GHGs, but fewer than hand-piled burning, and would eliminate the carbon emissions associated with chipping and hauling. Use of air curtains, carbonators, and kiln burners would not conflict with any of the existing plans and policies related to GHG emissions reductions.

#### **Impact GHG-2**

Use of vehicles and mechanical equipment and prescribed burning (pile burning and air curtains, carbonators, and kiln burners) during initial and maintenance treatments would result in GHG emissions. However, vegetation treatment would have relatively low GHG emissions compared to GHG emissions from catastrophic wildfires. Wildfire hazards, including wildfire intensity and rate of spread, could be somewhat reduced through implementation of the proposed project. The potential for treatment under the CalVTP to generate GHG emission was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.8.3, page 11-17). This impact is within the scope of the PEIR because the proposed project, as well as the associated equipment and duration of use, and the intent of the treatments to reduce wildfire risk, and GHG emissions related to wildfire would be consistent with those analyzed in the PEIR. MM GHG-2 would be implemented and would reduce GHG emissions associated with pile burning by burning when fuels have a higher fuel moisture content, reducing the total area burned by mosaic burning and isolating and leaving large fuels unburned and by scheduling burns before new fuels appear. Treatment activities would contribute to annual GHG emissions generated under the CalVTP, and this impact would fall within the finding of the PEIR of potentially significant and unavoidable. Methods for reducing GHG emissions from pile burning and air curtain burning would be integrated into SPR AQ-3 (Burn Plan) as described in MM GHG-2.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, greenhouse gas emissions and associated climate change impacts are global in nature and are not contained within the project area. Therefore, the GHG impact would be the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Air curtain burning and pyrolysis, which includes carbonators and kiln burners, may instead be used for debris disposal, which would also emit GHGs. GHG emissions from pile burning generally consist of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emissions. Use of air curtains and kiln burners would reduce CO<sub>2</sub> emissions compared to pile burning as forms of biomass processing. Air curtain burners and kiln burners emit 54 percent less CO<sub>2</sub> emissions compared to pile burning (Ascent Environmental, 2022). This is likely attributable to the fact that these technologies combust biomass at high temperatures and produce larger quantities of ash and biochar than pile burning. Thus, the operation of air curtain burners and kiln burners would reduce GHG

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emissions, resulting in an environmental advantage compared to pile burning (Ascent Environmental 2022).

The net GHG emissions generated from pyrolysis technologies such as carbonators are dependent on multiple factors, including the use of their byproduct (biochar) to fuel the system, which can be used to offset equivalent fossil fuels, such as gasoline, diesel, and natural gas to fuel and transport the carbonators. According to the life cycle assessments of the use of biofuels such as biochar, when accounting for the upstream external inputs (e.g., energy needed for heating, transportation, chipping), biofuels produced using these methods can reduce GHG emissions by at least 70 percent compared to equivalent petroleum fuel (Nie and Bi 2018, Argonne National Laboratory 2021 as cited in Ascent Environmental 2022). Therefore, the use of pyrolysis would reduce GHG emissions, providing an environmental advantage compared to pile burning.

Table 3-6 shows the percentage reductions of pollutants, including CO<sub>2</sub>, CH<sub>4</sub>, CO, and NO<sub>x</sub>, (Ascent Environmental 2022). Carbonators are not included in the quantification of pollutants emitted because the net GHG emissions generated from them are dependent on multiple factors, as discussed qualitatively above.

**Table 3-6 Air Curtains and Kiln Burners Percent Reduction in Emissions compared to Pile Burning**

Pollutant	Air curtains percent reduction in emissions	Kiln burners percent reduction in emissions
CO <sub>2</sub>	54	54
CH <sub>4</sub>	43	43
CO	96	96
NO <sub>x</sub>	73	39

Notes:

CO<sub>2</sub>: carbon dioxide; CH<sub>4</sub>: methane; CO: carbon monoxide; NO<sub>x</sub>: nitrous oxide.

Source: (Ascent Environmental 2022)

#### Cumulative Impacts

As noted in CalVTP Final PEIR Section 4.4.7, because climate change is a global phenomenon, the cumulative context of this impact comprises all past, present, and reasonably foreseeable projects in the world, including GHG emission sources and carbon sinks. No single project alone would measurably contribute to an incremental change in the global average temperature or to the global climate, local climates, or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

#### New Impacts Related to GHG Emissions

The proposed project is consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed project and determined it is consistent with the applicable regulatory and

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environmental conditions presented in the CalVTP PEIR (refer to Section 3.8.1 Regulatory Setting and Section 3.8.2 Environmental Setting in Volume II of the Final PEIR). The inclusion of land that is outside of the treatable landscape constitutes a change to the geographic extent of the PEIR. However, the same plans, policies, and regulations adopted to reduce GHG emissions apply in the areas outside the treatable landscape as within it. Likewise, the climate conditions are the same within the treatable landscape as they are just outside of it for the project. The use of air curtains, carbonators, and kiln burners would result in fewer GHG emissions compared with pile burning. No new impacts or substantially more significant impacts than what was analyzed in the PEIR would occur from the additional biomass processing methods. Therefore, impacts of the proposed project are also consistent with those covered in the PEIR. No circumstances would be changed, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. No new impact related to GHG emissions would occur.

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## 3.8 Energy Resources

### 3.8.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact ENG-1: result in wasteful, inefficient, or unnecessary consumption of energy?	LTS	Impact ENG-1, pp. 3.9-7–3.9-8	yes	NA	NA	LTS	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New energy impacts: Would the treatment result in other impacts to energy that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.8.2 Discussion

##### Impact ENG-1

The use of work vehicles, hauling vehicles, and mechanical equipment (e.g., cranes, masticators, chain saws, chippers) to implement the proposed project would result in the consumption of energy in the form of fossil fuels. The use of fossil fuels for equipment and vehicles was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.9.3, pages 3.9-7–3.9-8) and was found to be a less-than-significant impact. The consumption of energy during implementation of the proposed project would be within the scope of the PEIR because the types of activities, as well as the associated equipment and duration of proposed use, would be consistent with those analyzed in the PEIR. Diesel and petroleum-based fuels, such as gasoline, would be consumed from the use of heavy-duty equipment and trucks, mechanical equipment, and the transport of personnel and equipment to and from and within the project area. The primary objective of the proposed project is to reduce wildfire risk and decrease the intensity of fires. Wildfire response requires an immediate response from emergency personnel and mobilization of equipment from across the state and even across the nation, which often results in inefficient consumption of energy. Implementation of treatment activities would reduce wildfire risk and the intensity of fire responses. There are no SPRs applicable to this impact, and the impact would be less than significant, as consistent with the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing environmental and regulatory conditions are essentially the same within and outside the treatable landscape, and the types of treatment activities and associated use of energy would be of the same scale and scope as analyzed in the PEIR; therefore, the energy impact would be the same. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than analyzed in the PEIR.

The use of an air curtain burners, carbonators, and kiln burners requires little energy and would be consistent with the impacts described for pile burning in the PEIR. Impacts would be consistent with those analyzed in the PEIR, and no new impacts or substantially more significant impacts than what was covered in the PEIR would occur.

##### Cumulative Impact

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope for energy is the 250,000 acres of treatable land annually (CalVTP Final PEIR Section 4.4.8, page 4-19). The inclusion of 2,134 acres of treatment outside the treatable landscape would expand the geographic scope for the cumulative analysis but, as noted in the CalVTP PEIR, cumulative

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energy impacts would be less than significant and would not produce additional electricity or natural gas demand that would trigger additional infrastructure. As noted in the CalVTP PEIR, wildfires themselves require substantial and inefficient energy consumption during response, and implementation of treatment activities under the CalVTP, combined with other similar programs and plans, would improve the efficiency of energy consumption during such events through improved planning. This remains accurate for the proposed project both inside and outside the treatable landscape. Therefore, the proposed project's contribution to energy use would not be cumulatively considerable and would be consistent with the analysis in the PEIR.

#### **New Energy Resource Impacts**

The project proponent has considered the site-specific characteristics of the proposed project both inside and outside the treatable landscape and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (refer to Section 3.9.1 Regulatory Setting and Section 3.9.2 Environmental Setting in Volume II of the Final PEIR). The use of air curtain burners, carbonators, and kiln burners constitutes a change in treatment type that is consistent with the types analyzed in the PEIR. No circumstances would be changed, and the inclusion of areas outside of the CalVTP treatable landscape would not result in any new significant impacts. Therefore, no new impact related to energy resources would occur.

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## 3.9 Hazardous Materials, Public Health, and Safety

### 3.9.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact HAZ-1: Create a significant health hazard from the use of hazardous materials?	LTS	Impact HAZ-1, pp. 3.10-14–3.10-15	yes	HAZ-1, HAZ-2	NA	LTS	no	yes
Impact HAZ-2: Create a significant health hazard from the use of herbicides?	LTS	Impact HAZ-2, pp. 3.10-15–3.10-18	yes	HAZ 5 through HAZ-9	NA	LTS	no	yes
Impact HAZ-3: Expose the public or environment to significant hazards from disturbance to known hazardous material sites?	PS	Impact HAZ-3, pp. 3.10-18–3.10-19	yes	NA	HAZ-3	LTSM	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New hazardous materials, public health, and safety Impacts: Would the treatment result in other impacts to hazardous materials, public health, and safety that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.9.2 Discussion

##### Impact HAZ-1

Initial and maintenance treatments would include manual and mechanical treatments, pile burning, and other biomass treatment options and targeted herbicide application, which may utilize hazardous materials, including fuels, oils, and lubricants as well as accelerant. The potential for treatment activities to cause a significant health hazard from the use of hazardous materials was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.10.3, pages 3.10-14–3.10-15). This impact is within the scope of the PEIR because the types of treatments and associated equipment (Dennis 2002) and types of hazardous materials that would be used are consistent with those analyzed in the PEIR and would be less than significant. Equipment and vehicles used for treatment would require fuels and lubricants that could cause a health hazard if accidentally released into the environment. All equipment would comply with SPR HAZ-1 to minimize leakages and ensure proper equipment maintenance. In accordance with SPR HAZ-2, all mechanical hand tools would be equipped with spark arrestors to minimize any potential ignitions. Herbicide application impacts are discussed under Impact HAZ-2, below.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the exposure potential and regulatory conditions are essentially the same within and outside the treatable landscape because the equipment would be the same, the methods to minimize exposure would be the same, and the areas are adjacent. Therefore, the hazardous material impact would be the same, as described above. The proposed project would result in a less-than-significant impact related to the use of hazardous materials, and the project would not result in impacts that would be more severe than those evaluated in the PEIR.

The same types of hazardous materials would be used for the air curtains, carbonators, and kiln burners, limited to minor amounts of accelerant, which was addressed in the PEIR and would have less than significant impacts.

##### Impact HAZ-2

Initial and maintenance treatments would include targeted stump and spot spray herbicide treatments as part of an integrated pest management approach to kill or prevent regrowth of eucalyptus and other invasive and non-native species. The project would paint herbicide on the eucalyptus stumps immediately after cutting to inhibit regrowth. No aerial spraying of herbicides would occur. The potential for treatment activities to cause a significant health hazard from the use of herbicides was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.10.3, pages 3.10-15–3.10-18). This impact is within the scope of the PEIR because the types of herbicides and application methods that would be used, which are limited to ground-

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based applications, would be consistent with those analyzed in the PEIR. Targeted herbicides would be applied by licensed applicators in compliance with all laws, regulations, and herbicide label instructions, as consistent with herbicide use described in the PEIR. The herbicides proposed under the PEIR have low levels of toxicity for humans (CalVTP Final PEIR Volume II Section 3.10.3 Table 3.10-1, pages 3.10-16–3.10-17). Potential impacts associated with creating a health hazard would be less than significant. The proposed project would incorporate SPRs HAZ-5 through HAZ-9, which require the following: preparation of a Spill Prevention and Response Plan (SPR HAZ-5), compliance with all herbicide applications (SPR HAZ-6), triple-rinsing herbicide containers and proper herbicide disposal (SPR HAZ-7), employing techniques during application to minimize drift (SPR HAZ-8), and placing signage within 500 feet of areas receiving herbicide treatment (SPR HAZ-9). Herbicide application would also be conducted in accordance with all applicable regulations, including the town of San Anselmo and City of San Rafael Integrated Pest Management Plans (IPMPs) (Town of San Anselmo 2003, City of San Rafael 2017). In addition to the herbicides identified in the PEIR, the herbicide formulations for the proposed project would be limited to those listed in the town of San Anselmo and City of San Rafael IPMPs. All contractors hired to perform herbicide application activities would need to have appropriate training as required by the IPMPs. The town of San Anselmo IPMP requires public notification of herbicide application activities and the placement of signage at entryways accessed by people or cars at 100-foot intervals (Town of San Anselmo 2003). This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, the exposure potential is essentially the same within and outside the treatable landscape because the herbicide types, application methods, and licensed applicators would be the same, and the locations and potential receptors are adjacent. Therefore, the hazardous materials impact would be the same, and less than significant, as described above, with implementation of the same SPRs and MM HAZ-3.

The potential use of air curtains, carbonators, and kiln burners would not have any impacts associated with health hazards from use of herbicides.

#### **Impact HAZ-3**

The initial and maintenance treatments would include mechanical treatments, pulling of broom, and pile burning that would disturb soils and could expose workers, the public, or the environment to hazardous material if a contaminated site were present within the project area. The potential for workers participating in treatment activities to encounter contamination that could expose them or the environment to hazardous materials was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.10.3, pages 3.10-18–3.10-19). This impact was identified as potentially significant in the PEIR because hazardous materials sites could be present within project area, and soil disturbance or burning in those areas could expose people or the environment to hazards. MM HAZ-3 requires review of the DTSC EnviroStor and Cortese List to determine if any sites known to have previously used, stored, or disposed of hazardous

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materials are present and to avoid known sites. For the PSA, the EnviroStor and Cortese List were reviewed, and no contamination sites were found within the project area (Department of Toxic Substances Control 2023). With implementation of MM HAZ-3, the impact would be less than significant.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. Within the boundary of the project area, the potential to encounter hazardous materials and the regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because neither included any hazards identified on EnviroStor or the Cortese List and the locations are adjacent and similar in previous use and potential contaminants. Therefore, the hazardous materials impact would be the same, as described above, and less than significant with implementation of HAZ-3. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The use of air curtains, carbonators, and kiln burners would not result in any impacts associated with exposing the public or environment to known hazardous materials sites. The air curtain, carbonator, or kiln burner would be placed on already disturbed ground within the fuel break area. No known hazardous materials are present in the project area. Impacts would be consistent with the PEIR and would be less than significant.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope for hazardous materials is the 250,000 acres of treatable land annually and the surrounding areas (CalVTP Final PEIR Section 4.4.9, page 4-20). Therefore, the proposed project, both inside and outside the treatable landscape, would be within the geographic scope of the cumulative analysis. Contributions of the proposed project would be the same within the treatable landscape as outside the treatable landscape, and the cumulative hazardous materials impact analysis would remain the same as described in the PEIR—not cumulatively considerable for Impacts HAZ-1, HAZ-2, and HAZ-3.

#### **New Hazardous Materials, Public Health, and Safety Impacts**

The site-specific characteristics of the proposed project both inside and outside the treatable landscape would be consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (refer to Section 3.10.2 Regulatory Setting and Section 3.10.3 Environmental Setting in Volume II of the Final PEIR). The impacts of the proposed project would be consistent with those considered in the PEIR. No circumstances would be changed, and the inclusion of areas outside of the CalVTP treatable landscape would not result in any new significant impacts. Therefore, no new impact related to hazardous materials would occur.

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## 3.10 Hydrology and Water Quality

### 3.10.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
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?	LTS	Impact HYD-1, pp. 3.11-25–3.11-27	yes	AD-3, AQ-3, GEO-4 through GEO-8 HYD-1, HYD-4, HYD-6	NA	LTS	no	yes
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?	LTS	Impact HYD-2, pp. 3.11-27–3.11-29	yes	AD-3, HYD-1, HYD-2, HYD-4, HYD-5, HYD-6, GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-7, GEO-8, BIO-1, BIO-4, BIO-5, HAZ-1	NA	LTS	no	yes

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Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
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?	LTS	Impact HYD-3, p. 3.11-29	yes	AD-3, BIO-1, BIO-3 BIO-4, BIO-5, GEO-1, GEO-4, GEO-7, HYD-1, HYD-2, HYD-3, HYD-4, HYD-5, HYD-6, and HAZ-1	NA	LTS	no	yes
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?	LST	Impact HYD-4, pp. 3.11-30–3.11-31	yes	AD-3, BIO-1, BIO-4, BIO-5, GEO-1, GEO-7, HAZ-1, HAZ-5, HAZ-7, HYD-1, HYD-4, HYD-5, and HYD-6	NA	LTS	no	yes

### 3 PSA CHECKLIST

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact HYD-5: Substantially alter the existing drainage pattern of a treatment site or area?	LST	Impact HYD-5, p. 3.11-31	yes	AD-3, BIO-4, GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-6, GEO-7, HYD-1, HYD-2, HYD-4, and HYD-6	NA	LST	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

### 3 PSA CHECKLIST

New hydrology and water quality impacts: Would the treatment result in other impacts to hydrology and water quality that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.10.2 Discussion

##### Impact HYD-1

The project area is within the northern portion of the San Francisco Bay hydrologic region, which receives an average of 20 to 25 inches of rain a year. The San Francisco Bay hydrologic region extends north from Southern Santa Clara County to Tomales Bay and encompasses over 4,500 square miles. (CAL FIRE 2019). The climate in the project area typically consists of warm and dry summers followed by cool and wet winters. During the summer months, most of the rivers, creeks, and streams remain dry. Rainfall varies from season to season, with rain predominantly occurring between October and April. The project area is primarily within the Ross Valley watershed, with a small portion in the San Rafael Creek and Gallinas Creek watershed, all of which drain into the San Francisco Bay (Marin County Flood Control District 2023). Hydrographic features are shown in Figure 4a through 4e of Attachment D. Intermittent drainages occur throughout the project area that capture rainfall in winter and spring but are likely dry in the summer months. These drainages could eventually reach nearby surface waters or groundwater.

The proposed project would include pile burning. The potential for burning to generate ash and exposed soil from the burned areas that result in runoff and cause violations of water quality regulations or degrade water quality was examined in the PEIR and was found to be a less-than-significant impact (CalVTP Final PEIR Volume II Section 3.11.3, pages 3.11-25–3.11-27). This impact is within the scope of the PEIR and is consistent with the impacts analyzed in the PEIR. Pile burning would entail burning cut vegetation material and would be conducted in select areas, depending upon access and site conditions. Suitable treatment areas for pile burning are typically flat or with gentle slopes and have open areas away from tree canopies and power lines. Areas selected would be those away from waterways, pursuant to SPR HYD-4. Pile burning would be conducted in compliance with CAL FIRE regulations and Bay Area Air Quality Management District (BAAQMD) Regulation 5 for open burning and burn-day restrictions. SPRs applicable to this treatment are AD-3, AQ-3, GEO-4 through GEO-8, HYD-1, HYD-4, and HYD-6. SPR AD-3 requires that the treatment design be consistent with local plans, policies, and ordinances, and SPR AQ-3 requires a burn plan. SPRs GEO-4 through GEO-8 require erosion monitoring, draining stormwater with water breaks where appropriate, minimizing burn pile size, and that all slopes greater than 50 percent be evaluated by an RPF or geologist. SPRs HYD-1, HYD-4, and HYD-6 ensure that the treatments comply with the water quality regulations, watercourses protection zones be identified, burn piles be located outside of *watercourse and lake protection zones* (WLPZs) ranging from 50 to 150 feet as required around any waterways, and existing drainage systems be protected. These SPRs ensure avoidance and minimization of substantial water quality degradation. These SPRs would reduce the potential for pile burns to impact water quality and would preserve unburned streamside buffers to

### 3 PSA CHECKLIST

capture runoff from treatment areas. SPR GEO-4 requires implementation of erosion controls prior to the next rainy season and inspection for evidence of erosion after the first large storm or rainfall event. Any areas of erosion that would result in substantial sediment discharge would be remediated. Impacts would be consistent with the PEIR and less than significant with implementation of these SPRs.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing environment, regulatory conditions, and proximity to surface waters are essentially the same in the areas within and outside the treatable landscape. Therefore, the water quality impact from pile burning outside the treatable landscape would be the same, as described above, and would be less than significant with the implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The air curtains, carbonators, kiln burners would be staged on parking lots or roads away from water courses, and impacts would generally be less than those identified in the PEIR for pile burning with implementation of applicable SPRs because they would not result in bare soils as they would be located within an enclosed structure.

#### **Impact HYD-2**

The proposed project would include mechanical and manual treatments. Manual treatments would include use of hand tools and hand-operated power tools such as chainsaws, pole pruners, loppers, and string trimmers, which would be used to cut, clear, or prune herbaceous woody vegetation and remove dead wood vegetation. Mechanical treatments would include motorized equipment such as skidsteers or tractors with mounted masticators or cranes. The mechanical equipment would be used to cut, uproot, crush/compact, or chop existing vegetation on slopes of less than 35 percent, with the potential for use on slopes of less than 50 percent under certain conditions. No fill or discharge of fill material into waters of the U.S. would occur as part of the proposed project because waters of the U.S. would be avoided. Use of equipment for vegetation removal along the banks of streams may necessitate a section 1602 permit from CDFW. The potential for mechanical and manual treatment activities to violate water quality regulations or degrade water quality was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.11.3, pages 3.11-27–3.11-29) and was found to be less than significant with the incorporation of the SPRs. Streams that cross the project area do not meet the waterbody classification criteria in accordance with the California Forest Practice Rules due to the lack of fish, aquatic habitat, domestic water supplies, and capability for sediment transport. Therefore, a WLPZ would not be required for the proposed project. SPRs applicable to these treatments are AD-3, HYD-1, HYD-2, HYD-4 through HYD-6, GEO-1 through GEO-8, BIO-1, BIO-4, BIO 5, and HAZ-1. SPRs AD-3, HYD-1, HYD-4, and GEO-4 through GEO-8 are described under Impact HYD-1. SPRs GEO-1 through GEO-3 require the suspension of ground disturbance during heavy precipitation, limit high-ground-pressure vehicles, and require stabilizing disturbed-soil areas. SPRs HYD-2 and HYD-5 would require that the construction of new roads be avoided and that equipment be fueled and serviced outside of wet areas. SPRs

### 3 PSA CHECKLIST

BIO-1, BIO-4, and BIO-5 would require the review and survey of specified biological resources and that treatment design avoid loss of riparian habitat function and avoid the conversion of chaparral habitat (i.e., maintain the habitat function). SPR HAZ-1 requires that all equipment be maintained and regularly inspected for leaks. These SPRs would either minimize or avoid the risk of substantial water quality degradation by implementation of mechanical treatment, thereby making the impacts less than significant, as consistent with the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. This impact is within the scope of the PEIR because the surface water conditions and regulatory conditions are essentially the same within and outside the CalVTP treatable landscape, and the use of heavy equipment and hand-held tools to remove vegetation and associated impacts on water quality would be consistent with those analyzed in the PEIR. Impacts would be the same, and less than significant, with the implementation of the same SPRs.

If used, an air curtain burner, carbonator, or kiln burner would be staged on parking lots or roads away from water courses, and impacts would generally be less than those identified in the PEIR for pile burning with implementation of applicable SPRs because the biomass treatment types would be in enclosed structures that would reduce potential to result in water quality degradation.

#### **Impact HYD-3**

Project treatments would include prescribed herbivory to reduce fuel loads in shrubland, forest understory, and grasslands after removal of the eucalyptus or as a means of reducing fine fuels in the defensible space areas. The prescribed herbivory used as part of the proposed project would typically involve use of goats and sheep but, under the CalVTP, could also include horses and cattle and may require the installation of temporary fencing where natural barriers are not present. The use of temporary water facilities for the livestock and guard animals and/or shepherds, as well as other temporary infrastructure (e.g., tanks, corrals, fences), may be required with the use of prescribed herbivory as a treatment method. Site preparation could involve installation of a portable electric fence to contain the livestock. The herder for the prescribed herbivory would determine the area to be grazed based on site conditions, which would typically range from 1 to 2 acres at one time for goats. A broader area would be grazed by other larger livestock such as cattle and horses, as determined based on site conditions. The potential for prescribed herbivory treatment activities to violate water quality regulations or degrade water quality was examined in the PEIR and was found to be less than significant with the implementation of the SPRs (CalVTP Final PEIR Volume II Section 3.11.3, page 29). SPRs applicable to this treatment are AD-3, BIO-1, BIO-4, BIO-5, GEO-1, GEO-4, GEO-7, HYD-1, HYD-2, HYD-3, HYD-4, HYD-6, and HAZ-1. All applicable SPRs listed, except SPR HYD-3, are described in Impact HYD-1 and Impact HYD-2. SPR HYD-3 ensures that water quality protection be in place for prescribed herbivory. These SPRs would minimize or avoid the risk of substantial water quality degradation by implementation of prescribed herbivory treatment, making the impact less than significant.

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The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. This impact is within the scope of the PEIR because the surface water conditions are essentially the same within and outside the CalVTP treatable landscape because they are adjacent the treatable landscape and within the same watershed, and the use of prescribed herbivory to remove vegetation and associated impacts on water quality would be consistent with those analyzed in the PEIR. The same SPRs would be applicable to ensure the less-than-significant impact. Therefore, the water quality impact from prescribed herbivory treatments would be the same. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

No prescribed herbivory is associated with use of the air curtain burner, carbonator, or kiln burner. No impacts related to prescribed herbivory would occur from its use.

#### **Impact HYD-4**

Project treatments would include targeted herbicide application, primarily by painting on eucalyptus stumps but also potentially as spot spray treatments, to kill or prevent regrowth of invasive and non-native species. No aerial spraying of herbicides would occur. Herbicides would be applied with adherence to all U.S. Environmental Protection Agency (EPA) and California Environmental Protection Agency (CalEPA) regulations, and in such a way as to prevent overdrift, as well as in compliance with the Town of San Anselmo and City of San Rafael IPMPs. The use of herbicides has the potential to violate water quality standard regulations or degrade water quality, which was examined in the PEIR, with a finding that the impacts would be less than significant (CalVTP Final PEIR Volume II Section 3.11.3, pages 3.11-29–3.11-31). SPRs applicable to this treatment are AD-3, BIO-1, BIO-4, BIO-5, GEO-1, GEO-7, HAZ-1, HAZ-5, HAZ-7, HYD-1, HYD-4, HYD-5, and HYD-6. All applicable SPRs listed, except SPR HAZ-5 and HAZ-7, are described in Impact HYD-1 and Impact HYD-2. SPRs HAZ-5 and HAZ-7 would ensure that a spill prevention and response plan is implemented and that herbicide containers be triple rinsed. These SPRs would minimize or avoid the risk of substantial water quality degradation by implementation of herbicide treatment, thereby making the impacts less than significant.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. The existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent the treatable landscape and have similar environmental conditions, including the same waterbodies and the same regulatory setting. Potential impacts outside the treatable area are within the scope of the activities and impacts addressed in the PEIR because the methods of herbicide application, transportation, storage, and disposal are consistent with those analyzed in the PEIR with implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was analyzed in the PEIR.

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The use of the air curtain burner, carbonator, and kiln burner would result in no impacts associated with the use of herbicides.

#### **Impact HYD-5**

Some of the proposed project treatments could cause ground disturbance and minor erosion, which could directly or indirectly modify existing drainage patterns. The potential for treatments to substantially alter the existing drainage pattern was examined in the PEIR, and the impacts were found to be less than significant (CalVTP Final PEIR Volume II Section 3.11.3, page 31). As described in the PEIR, these activities would have minor impacts to on-site drainage with implementation of SPRs. The potential impacts are within the scope of the activities and impacts addressed in the PEIR because the use of equipment and treatment activities would be consistent with those analyzed in the PEIR. SPRs applicable to this treatment are AD-3, BIO-4, GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-6, GEO-7, HYD-1, HYD-2, HYD-4, and HYD-6. All applicable SPRs listed are described in Impact HYD-1 and HYD-2. These SPRs would avoid and minimize the risk of substantial altering of the existing drainage pattern, thereby making the impacts less than significant.

The inclusion of land that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, and existing drainage patterns pass through both areas. Therefore, the impact related to alteration of site drainage patterns is also the same. The potential for those treatments to substantially alter the existing drainage patterns of a treatment area was evaluated in the PEIR and was found to be less than significant with implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

If used, the air curtain burner, carbonator, or kiln burner would be staged on parking lots or roads away from water courses, and impacts would generally be the same or less than those identified in the PEIR for pile burning with implementation of applicable SPRs.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed project would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope for hydrology and water quality is California's hydrologic regions and groundwater basins (CalVTP Final PEIR Section 4.4.10, page 4-21). The proposed project, both inside and outside the treatable landscape, would be within the geographic scope of the cumulative analysis. Because the treatment areas for the proposed project are within the same cumulative geographic scope inside the treatable landscape as outside, and the treatment types and potential impacts to hydrology and water quality would be the same, the cumulative contribution of the proposed project would be the same inside as outside the treatable landscape and the impacts would be

### 3 PSA CHECKLIST

consistent with those analyzed in the PEIR. Contributions of the proposed project would therefore not be cumulatively considerable for Impacts HYD-1 through HYD-5.

#### **New Hydrology and Water Quality Impacts**

The site-specific characteristics of the proposed project would be consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.11.1 Regulatory Setting and Section 3.11.2 Environmental Setting in Volume II of the Final PEIR).

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the hydrology, water quality, and treatment methods would be consistent with those analyzed in the PEIR; thus, they are also within the scope of the PEIR. The use of air curtain burners, carbonators, or kiln burners constitutes a change in treatment type, but the hydrology and water quality impacts of these biomass disposal methods are consistent with treatment types analyzed in the PEIR and would not result in any new or more significant impacts to hydrology or water quality. Additionally, the existing environmental and regulatory conditions pertinent to hydrology and water quality are the same inside as outside of treatable landscape within the project area.

### 3 PSA CHECKLIST

## 3.11 Land Use and Planning, Population and Housing

### 3.11.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact LU-1: Cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation?	LTS	Impact LU-1, pp. 3.12-13–3.12-14	yes	AD-3	NA	LTS	no	yes
Impact LU-2: Induce substantial unplanned population growth?	LTS	Impact LU-2, pp. 3.12-14–3.12-15	yes	NA	NA	LTS	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

### 3 PSA CHECKLIST

New land use and planning, population and housing impacts: Would the treatment result in other impacts to land use and planning, population and housing that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.11.2 Discussion

##### Impact LU-1

The proposed project would develop and maintain a fuels reduction and forest health restoration zone through use of manual treatments, ground-based mechanical treatments, prescribed herbivory, pile burning, and targeted herbicide application as well as biomass disposal, including pile burning. Treatments would occur on property owned by the MCOSED, Marin Municipal Water District, Ross Valley School District, public property managed by the Town of San Anselmo, and private property. The potential for vegetation treatment activities to cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.12.3, pages 3.12-13–3.12-14). The proposed project would comply with all applicable city and county general plans, policies, and ordinances (SPR AD-3). As noted in Section 3.12 Noise, treatment activities would take place during daytime hours, consistent with the Marin County Noise Ordinance (Marin County, n.d.). The project would comply with sections 4290 and 4291 of the California Resources Code, which require property owners to establish defensible space around their properties. The project would also comply with the City of San Rafael specific fire codes such as Chapter 4.12 (Wildland-Urban Interface – Vegetation Management Standards), Town of San Anselmo specific fire codes such as Article 10 (International Wildland Urban Interface Code) and Chapter 16 section 16.16.010 of the Marin County Municipal Code (Adoption of California Fire Code and International Fire Code). As part of the proposed project, MWPA invited local agencies to a meeting in August 2023 to discuss the project and address any concerns.

The proposed project would comply with applicable tree ordinances, including the following:

- The Marin County Tree Removal Permit requirements, which allows trees to be removed without a permit if the tree is in poor health due to disease, damage, or age, or if the tree has been identified as a fire hazard by a fire inspector or would provide for the routine management and maintenance of public land or to construct a fuel break (Marin County, n.d.)
- The Town of San Anselmo tree work permit is required to remove or significantly prune any heritage tree, any tree on undeveloped property, and any street tree. A heritage tree is defined as a tree with a diameter at breast height (dbh) of 22 inches (breast height being 4.5 feet above grade). Pruning is defined as, and limited to, removal of less than 25 percent of the tree's foliage. A permit is required to remove any tree on undeveloped property with a dbh of 7 inches (Town of San Anselmo, n.d.).
- The City of San Rafael requires a permit for any person to cut, prune, break, injure or remove any living tree in, upon, or along any public street, sidewalk, or walkway in the

### 3 PSA CHECKLIST

city or cut, disturb, or interfere in any way with the roots of any tree in, upon, or along any street, sidewalk, or walkway, or spray with any chemical or insecticide any tree in, upon, or along any public street, sidewalk, or walkway, or place any sign, poster, or other fixture on any tree or tree guard, or injure, misuse, or remove any device placed to protect any tree in, upon, or along any public street, sidewalk, or walkway in the city (City of San Rafael, n.d.).

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent considered in the PEIR. However, land use in the project area is essentially the same within as outside the treatable landscape because the areas are within the same jurisdictions, are adjacent, and include the same types of private and public uses. Therefore, the land use impact is also the same, as described above, and would be less than significant. No conflict would occur because the project proponent would adhere to SPR AD-3, which requires the project proponent to design and implement the treatment in a manner that is consistent with applicable local plans, policies, and ordinances. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than covered in the PEIR.

Impacts to land use from air curtains, carbonators, and kiln burners would be similar to those of pile burning and would be consistent with plans, policies, and ordinances following appropriate methods. This impact is within the scope of the PEIR and would be less than significant because the treatment types and activities are consistent with those analyzed in the PEIR.

#### **Impact LU-2**

The specific crews who would conduct treatments are not known at this time. A contractor crew typically consists of 10 to 12 workers per crew. More crew members may be utilized, but crews typically consist of fewer than 25 workers. Multiple crews could operate at the same time. The potential for treatments to result in substantial population growth as a result of increases in demand for employees was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.12.3, pages 3.12-14–3.12-15). The CalVTP PEIR estimates the average crew size to consist of 20 to 25 workers. Impacts associated with short-term increases in the demand for workers during implementation of the treatment project are within the scope of the PEIR and would be less than significant. The number of workers required for implementation of the treatments is consistent with the crew size analyzed in the PEIR for the types of treatments proposed. The proposed project would not require the permanent hiring of new employees.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the population and housing characteristics of the project area are essentially the same within as outside the treatable landscape, they are within the same jurisdictions, and the crews who would perform the work would be the same. Therefore, the population and housing impacts would be the same, as described above, and less than significant. No SPRs are applicable to this

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impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

Impacts to land use from air curtain, carbonator, or kiln burning would be similar to those of pile burning and, as with pile burning, consistency with plans, policies, and ordinances would be reviewed prior to use of other biomass treatment options. This impact is within the scope of the PEIR and would be less than significant because the treatment types and activities would be consistent with those analyzed in the PEIR.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to the approximately up to 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope of the land use and planning, population, and housing impacts is the treatable landscape. The inclusion of 95 acres of treatment outside the treatable landscape would expand the geographic scope for the cumulative analysis, but the jurisdictions and the population and housing profile would remain the same because the lands outside the treatable landscape do not include any new jurisdictions. As noted in the CalVTP PEIR, because the proposed project is assessed for its potential to conflict with land use plans, policies, or regulations and to mitigate any potential impacts, as necessary, there are no existing significant cumulative impacts related to conflicts with land use plans, policies, and regulations that are developed for the purpose of avoiding or mitigating an environmental effect. Therefore, the cumulative land use impact analysis for the proposed project, including the areas outside the treatable landscape, is the same as described in the PEIR and is not cumulatively considerable for Impact LU-1.

The geographic scope for the population and employment cumulative analysis is the treatable landscape and surrounding areas, which encompasses the proposed project and includes lands surrounding the treatable landscape. The proposed project would not substantially increase the employment demand because the PEIR considered employment demand for up to 500,000 acres annually and found that the combination of employment demand for CalVTP and these cumulative projects would not be a substantial cumulative increase that would exceed planned population growth throughout the state or result in cumulative growth in some areas that would result in the need for new housing, roads, or infrastructure. The cumulative impact to population and housing for the proposed project, including the areas outside the treatable landscape, would be the same as described in the PEIR, and inducement of substantial population growth would not be cumulatively considerable.

#### **New Land Use and Planning, Population, and Housing Impacts**

The site-specific characteristics of the proposed treatments are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.12.1 Environmental Setting and Section 3.12.2 Regulatory Setting in Volume II of the Final PEIR).

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within

### 3 PSA CHECKLIST

the boundary of the project area, the existing environmental conditions pertinent to land use and population that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as previously described. The use of air curtains, carbonators, and kiln burners constitutes a change in treatment type, but the land use and population impacts would be consistent with the treatment types analyzed in the PEIR and would not result in any new or more significant land use impacts. The proposed project is consistent with the types of projects covered in the PEIR. No circumstances would be changed, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impact. Therefore, no new impact related to land use and population would occur.

### 3 PSA CHECKLIST

## 3.12 Noise

### 3.12.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact NOI-1: Result in a substantial short-term increase in exterior ambient noise levels during treatment implementation?	LTS	Impact NOI-1, pp. 3.13-9–3.13-12; Appendix NOI-1	yes	AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6.	NA	LTS	no	yes
Impact NOI-2: Result in a substantial short-term increase in truck-generated SENLs during treatment activities?	LTS	Impact NOI-2, p. 3.13-12	yes	AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6.	NA	LTS	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New noise impacts: Would the treatment result in other impacts to noise that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.12.2 Discussion

##### Impact NOI-1

The project treatment activities that have the potential for short-term increase in ambient noise level include manual treatments and ground-based mechanical treatments. Prescribed herbivory used for maintenance after eucalyptus removal would potentially occur 24 hours per day, but as noted in the PEIR (CalVTP Final PEIR Volume II Section 3.13.3, page 3.13-9), prescribed herbivory would not require the use of heavy off-road equipment. Noise generated by this treatment type would be negligible, and it is not further discussed. The manual treatments for this project include hand-operated power tools, and the mechanical treatments include but are not limited to skid steers, cranes, and masticators. Manual and mechanical treatments would generally occur during weekdays between 8:00 a.m. and 5:00 p.m., anticipated to begin in fall/winter 2023. Work would be conducted over several years, including maintenance for up to 10 years. Multiple crews may be working at the same time, temporarily increasing ambient noise in the vicinity. Due to the nature of the proposed project, private residences and other noise sensitive land uses are adjacent to the work area and would temporarily be exposed to noise. The project area falls within the city of San Rafael and town of San Anselmo as well as unincorporated Marin County. The potential for treatment activities to cause substantial short-term increases in exterior ambient noise level was addressed in the PEIR (CalVTP Final PEIR Volume II Section 3.13.3, page 3.13-9–3.13-12). SPRs applicable to the proposed project include AD-3, which requires the treatments to be consistent with local plans, policies, and ordinances. Marin County limits construction to between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and between the hours of 9:00 a.m. and 6:00 p.m. on Saturdays, provided that the noise level at any point outside of the property plane of the project shall not exceed 90 dBA (Marin County 2022). The City of San Rafael’s construction noise requirements also limit construction to between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and between the hours of 9:00 a.m. and 6:00 p.m. on Saturdays. The Town of San Anselmo’s construction noise requirements limits construction to between the hours of 7:00 a.m. and 7:00 p.m. Monday through Friday and between the hours of 9:00 a.m. and 5:00 p.m. on Saturdays. All work would be conducted within the permitted times, per SPR AD-3. Additional SPRs applicable to the proposed project include NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6. SPRs NOI-1 through NOI-6 would require that heavy equipment be used only during daytime hours, equipment be properly maintained, engine shrouds be closed during mechanical equipment operation and idle time restricted to 5 minutes, all staging areas be placed away from noise sensitive land uses, and any noise sensitive receptors be notified ahead of work to ensure impacts to ambient noise levels would be less than significant.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However,

### 3 PSA CHECKLIST

the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent the treatable landscape and would be subject to the same noise ordinances and would have similar noise sensitive receptors. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The use of an air curtain burner, carbonator, or kiln burner would generate some noise. Air curtain burners and carbonators would generate noise primarily limited to the small diesel engine that powers a fan and the blower fan itself. For previous work, a hearing protection area was established 50 feet around the engine and fan (Dennis 2002). Kiln burners typically consist of burning debris in open-top metal containers and would generate noise levels similar to pile burning. SPRs would require the biomass disposal methods to be placed away from sensitive receptors and adherence to the noise ordinance hours to limit any noise disturbances to nearby sensitive receptors. The noise generated by the alternative biomass disposal methods would be comparable with other mechanical and manual equipment considered in the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

#### **Impact NOI-2**

The project treatment activities would require large trucks to haul equipment and crews to the project area. While trucks would pass sensitive receptors (i.e., residences), it is not anticipated that project traffic would result in a substantial increase in truck-generated noise along local roads. These large trucks pose the potential for a substantial short-term increase in *single event noise levels* (SENL), but trucks would only be in use during work hours from 8:00 a.m. to 5:00 p.m. Monday through Friday, in compliance with local noise ordinances (see Impact NOI-1). The SENL describes a receiver's cumulative noise exposure from a single impulsive noise event (e.g., an automobile passing by, an aircraft flying overhead), which is defined as an acoustical event of short duration and involves a change in sound pressure above some reference value (CAL FIRE 2019). The impacts would be within the scope of the PEIR because the treatment activities and methods would be the same as those analyzed in the PEIR. SPRs applicable to this treatment are AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6, as described under Impact NOI-1. The potential for a substantial short-term increase in SENL during the project treatments was evaluated in the PEIR and was found to be less than significant with the implementation of the aforementioned SPRs.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing roadway network and access road used by the worker vehicles and trucks for hauling would be the same to reach the treatable landscape inside the treatable landscape as outside. Therefore, the noise impact would be the same, as described above, and would be less than significant with the application of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

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The use of air curtain burners, carbonators, and kiln burners would not require the extensive use of additional trucks. A truck may be used to deliver and remove the burner but would generally require one trip per project. Impacts would fall within those described in the PEIR, and no new or more severe significant impacts would occur.

#### **Cumulative Impacts**

As noted in the CalVTP EIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope of the noise resource cumulative impact analysis from the CalVTP EIR is the entirety of the treatable landscape. In addition to the lands treated under the CalVTP PEIR, there are several similar past, present, and reasonably foreseeable projects that could generate similar noise within and surrounding the treatable landscape (CalVTP Final PEIR Section 4.4.1 page 4-23). Based on review of the PEIR cumulative analysis, the proposed project, including lands within and outside the treatable landscape, would fall within the cumulative analysis for noise because they would be within the 250,000 acres assumed treated annually, would have similar conditions to the cumulative setting due to their proximity to the treatable landscape and similar vegetation conditions, and would have the same noise sensitive receptors due to their adjacency to the treatable landscape. As noted in the PEIR, it is not anticipated that temporary noise generated by vegetation treatment activities under the CalVTP, and noise related to non-CalVTP projects would simultaneously impact the same noise-sensitive receptors due to the size of the treatable landscape and duration of the vegetation treatments (CalVTP Final PEIR Section 4.4.12 page 4-23). As with the treatments inside the treatable landscape, the noise impacts would occur during a limited duration and would be reduced through SPR NOI-1, SPR AD-3, SPR NOI-6, and SPR NOI-4. Therefore, the cumulative noise impact analysis for the proposed project, including the areas outside the treatable landscape, is the same as described in the PEIR and is not cumulatively considerable.

#### **New Noise Impacts**

The site-specific characteristics of the proposed project are consistent with the applicable environmental and regulatory conditions presented in the PEIR (refer to Section 3.13.1 Environmental Setting and Section 3.13.2 Regulatory Setting in Volume II of the Final PEIR).

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing environmental and regulatory conditions pertinent to noise that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as previously described. The use of an air curtain burner, kiln, and carbonator constitutes a change in treatment type, but the noise impacts of the biomass disposal methods are consistent with the types of treatment types analyzed in the PEIR (e.g., less noisy than a chipper) and would not result in any new or greater types of noise impacts. The proposed project is consistent with the types of projects covered in the PEIR. No changed circumstances would lead to new significant impacts not addressed in the PEIR. Therefore, no new impact related to noise would occur that is not analyzed in the PEIR.

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## 3.13 Recreation

### 3.13.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact REC-1: Directly or indirectly disrupt recreational activities within designated recreation areas?	LTS	Impact REC-1 pp. 3.14-6–3.14-7	yes	AD-3, REC-1	NA	LTS	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New recreation impacts: Would the treatment result in other impacts to recreation that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.13.2 Discussion

Over 65 acres of the project area are in recreational areas owned and managed by Marin County Parks and the Town of San Anselmo, and the Mount Tamalpais Cemetery grounds are also used for recreation. Recreational trails, including the Memorial Ridge Trail and the Red Hill Trail, are located within the project area. These publicly available trails may be closed for short durations during treatment activities. Any closures would be timed and coordinated with Marin County Parks, the Town of San Anselmo, and Mount Tamalpais Cemetery as well as other agencies. The potential for vegetation treatment and maintenance activities to disrupt recreation activities was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.14.3 pages 3.14-6–3.14-7). The proposed project would comply with SPR REC-1, which requires the notification of recreational users of any temporary closure that would result from treatment activities. The proposed project would also comply with all local plans, policies, and ordinances (SPR AD-3). The potential for the proposed project to impact recreation is within the scope of the PEIR and would be less than significant because the treatment activities and intensity are consistent with those analyzed in the PEIR.

The inclusion of land in the project area that is outside the treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the availability of recreational resources within the project area is essentially the same as outside the treatable landscape because the areas are adjacent, the recreational trails are located within and outside the treatable landscape, and the recreational users would be the same. Impacts on recreation would be the same as previously described and would be less than significant. Implementation of SPRs AD-3 and REC-1 would minimize disruption to recreational activities within the project area. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

If an air curtain, carbonator, or kiln burner were used, it would likely be staged in a disturbed area or parking lot. Effects to recreation would be highly localized and fall within those described in the PEIR in terms of temporary limitations to access to the facilities (e.g., limiting parking). SPR AD-3 and REC-1 would also minimize disruption to recreationalists. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

#### Cumulative Impacts

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to the approximately up to 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope of the recreation cumulative impact analysis from the PEIR is the recreational areas within the treatable landscape. As noted in the PEIR, implementation of the CalVTP

### 3 PSA CHECKLIST

would treat vegetation within the treatable landscape and would not involve the development of residential communities or similar types of development or induce substantial population growth in an area that would require the construction or expansion of recreational facilities (CalVTP Final PEIR Section 4.4.13, page 4-24). Proposed treatment activities may temporarily restrict public access to surrounding areas for safety reasons or cause nuisance impacts related to dust, noise, safety, aesthetics, and traffic; this would disrupt the recreation experience both inside and outside the treatable landscape. These effects would be similar inside and outside the treatable landscape because the recreation features and trails are the same and the recreational users are the same. As noted in the PEIR, SPRs would minimize disruptions to recreational users. Impacts to recreation are not anticipated to be cumulatively considerable and, thus, the proposed project would not make a significant contribution to disruption of recreational resources.

#### **New Recreation Impacts**

The proposed project is consistent with the treatment types and activities considered in the PEIR. The site-specific characteristics of the proposed project are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.14.1 Environmental Setting and Section 3.14.2 Regulatory Setting in Volume II of the Final PEIR).

The inclusion of land in the project area that is outside the treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions pertinent to recreation that are present in the project area outside the treatable landscape are essentially the same as those within the treatable landscape, as described previously. The use of an air curtain, carbonator, and kiln burner are consistent with the treatment types analyzed in the PEIR and would not result in any new or more significant recreational impacts. No circumstances would be changed, and the inclusion of areas outside of the CalVTP treatable landscape would not result in any new significant impacts. Therefore, no new impact related to recreation would occur.

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## 3.14 Transportation

### 3.14.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
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?	LTS	Section 3.15.2; Impact TRAN-1 pp. 3.15-9–3.15-10	yes	AD-3, TRAN-1	NA	LTS	no	yes
Impact TRAN-2: Substantially increase hazards due to a design feature or incompatible uses?	LTS	Impact TRAN-2 pp. 3.15-10–3.15-11	yes	AD-3, TRAN-1	NA	LTS	no	yes
Impact TRAN-3: Result in a net increase in VMT for the proposed CALVTP?	PSU	Impact TRAN-3 pp. 3.15-11–3.15-13	yes	NA	AQ-1	LTSM	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New transportation impacts: Would the treatment result in other impacts to transportation that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.14.2 Discussion

##### Impact TRAN-1

The proposed project would require limited vehicular traffic along public roadways used to access existing fire roads and trails leading to the specific treatment areas. Project-related traffic would include heavy-vehicle trips to haul equipment and materials as well as trips associated with the workers commuting to and from the project area. Initial treatment would involve more heavy equipment than subsequent maintenance. A single contractor crew could typically consist of 5 to 10 workers at a single location. Crew sizes may vary but would be unlikely to exceed 25 workers. Work would generally occur during weekdays between 8:00 a.m. and 5:00 p.m.; therefore, the increase of vehicle traffic on the surrounding local roads would occur before 8:00 a.m. and after 5:00 p.m. The number of truck trips and worker vehicle trips to and from the project area would vary based on the size of the area being treated, the type of treatment being implemented, and the duration of the vegetation treatments. The potential for a temporary increase in vehicle traffic associated with the proposed project work to conflict with a program, plan, ordinance, or policy addressing roadway facilities, or for prolonged road closures, was examined in the PEIR (CalVTP Final PEIR Section 3.15.2, page 3.15-9 and 3.15-10) and found to be less than significant. The anticipated temporary increases in traffic related to the proposed project is within the scope of the PEIR because the treatment duration and limited number of vehicles (i.e., crane, masticator transport, and crew vehicles for crew members) associated with the proposed project are consistent with those analyzed in the PEIR. The proposed project treatment activities would not all occur concurrently, nor would they all occur annually, and increases in vehicle trips associated with the treatments would be dispersed on multiple roads, including local roads. SPRs applicable to the project are AD-3 and TRAN-1. Implementing SPR AD-3 would require the treatments to be consistent with local plans, policies, and ordinances, and TRAN-1 would ensure that traffic control measures would be placed on affected roadways during project treatment activities.

The inclusion of land in the proposed treatment area that is outside the treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing transportation conditions (e.g., roadways, road use) present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they continue beyond the treatable landscape and are under the same jurisdictions and would be subject to the same program, plan, ordinance, or policy regarding roadway facilities and closures. Therefore, the transportation impact would be the same and would be less than significant with the implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

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The use of air curtain burners, carbonators, and kiln burners may require additional truck trips to deliver and remove the burners. Traffic impacts would be limited and the same as those described in the PEIR for the delivery of other equipment. The impacts would fall within the scope of the PEIR and would not constitute a substantially more severe significant impact than is analyzed in the PEIR.

#### **Impact TRAN-2**

The project treatment activity that could potentially increase the transportation impacts during the project would be the use of pile burning due to smoke emissions, which could temporarily affect visibility on nearby roadways. This could occur during true pile burning and kiln burning; an air curtain and carbonator burner, while also creating smoke, would create less smoke. The potential for smoke to affect visibility along roadways during implementation pile burning is analyzed in the PEIR (CalVTP Final PEIR Section 3.15.2, page 3.15-10 and 3.15-11) and was found to be less than significant. Vegetation piles for burning would be approximately 4 feet in diameter and 4 feet in height, and pile burning would be conducted in compliance with CAL FIRE and Bay Area Air Quality Management District (BAAQMD) Regulation 5 for open burning and burn day restrictions. SPRs applicable to this treatment are AD-3 and TRAN-1, described under Impact Tran-1. The project proponent would prepare and implement a Traffic Management Plan (TMP) to avoid and minimize temporary transportation impacts under this SPR. Therefore, the project treatment activities would not substantially increase hazards due to a design feature or incompatible uses, and impacts would be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

The project area includes land that is outside the treatable landscape. While this constitutes a minor change to the geographic area considered in the PEIR, the existing environmental conditions for the land outside the treatable landscape and on the land inside the treatable landscape are essentially the same. Further, the project would use the same access roads for land inside and outside the treatable landscape. Therefore, the potential to increase road hazards would be the same for project areas outside the treatable landscape as for areas within the treatable landscape. As a result, the impact to increased hazards is also the same and within the scope of the PEIR. The project would result in a less-than-significant impact related to increasing road hazards and would not result in a more significant impact than covered in the PEIR.

If air curtains, carbonators, or kiln burners were used, they would create substantially less smoke than pile burning (Ascent Environmental, 2022). Therefore, the potential to increase hazards through use of alternative biomass disposal methods would be the same as described in the CalVTP. SPR AD-3 and TRAN-1 would also reduce effects. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

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#### **Impact TRAN-3**

The proposed project treatment activities could temporarily increase vehicle miles travelled (VMTs) above baseline conditions because the project access locations are in semi-remote locations along fire roads and other small, local roadways. Project-related traffic would include heavy-vehicle trips to haul equipment and materials as well as trips associated with the workers commuting to and from the treatment areas. The number of truck trips and worker vehicle trips to and from the project area would vary based on the size of the area being treated and the duration of the vegetation treatments. This impact was identified as potentially significant and unavoidable in the PEIR (CalVTP Final PEIR Section 3.15.2, page 3.15-11 to 3.15-13) because implementation of the CalVTP would result in a net increase in VMT. However, as stated in Impact TRAN-3 of the PEIR, individual projects under the CalVTP are likely to generate fewer than 110 trips per day, which is expected to cause a less-than-significant transportation impact for specific later activities, as described in the Technical Advisory on Evaluating Transportation Impacts published by the Governor's Office of Planning and Research (Governor's Office of Planning and Research 2018). Per the analysis methodologies presented in the PEIR, projects that generate or attract fewer than 110 trips or 50 vehicles bringing crews and equipment to and from the project area per day generally may be assumed to result in a less-than-significant transportation impact. While the cubic yards of material that could be disposed of each workday from a single treatment area would vary, it would likely constitute fewer than 10 typical dump trucks. Because of the small sizes of the crews needed for the proposed project (likely in the range of under 25 workers), the limited equipment needed, and the limited materials to be hauled in any one day, the total VMT would not exceed 110 trips per day. Biomass removal, if not disposed of on site, would require more vehicle trips than other treatment activities. Vehicle trips would be dispersed across several roadways and would utilize particular roadways for short durations. On this account, impacts related to a potential increase in VMT would be less than significant. Hiring local contractors would be encouraged where feasible to reduce the number of VMTs. MM AQ-1 would not apply to the impact because the impact would be less than significant.

The inclusion of land in the proposed treatment area that is outside the treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the existing transportation conditions (e.g., roadways, road use) present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent the treatable landscape and a continuation of the same roads. Therefore, the transportation impact would be the same, as described above, and would be less than significant. The most VMTs would occur at the beginning and end of the project to haul equipment in and out of the project area. Daily VMTs would consist of crew transportation to and from the site and, potentially, hauling removed material. No SPRs apply to this impact, nor would MM AQ-1, as impacts would be less than significant.

The use of an air curtain burner, kiln burner, or carbonator would not result in an increase in VMTs and would allow biomass treatment closer to the work sites. Additionally, the use of

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biomass treatment methods could reduce the number of truck trips for hauling biomass off site by treating vegetation on site.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts for the proposed CalVTP would occur within and proximate to the approximately up to 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope of the transportation cumulative impact analysis from the PEIR is the treatable landscape and the surrounding roadway network used to access individual vegetation treatment sites. In addition to the lands treated under the CalVTP PEIR, there are several similar past, present, and reasonably foreseeable projects that have affected and likely would affect transportation networks within and surrounding the treatable landscape (CalVTP Final PEIR Section 4.4.14, page 4-24). Based on review of the CalVTP PEIR cumulative analysis, the proposed project, including lands within and outside the CalVTP treatable landscape, would fall within the cumulative analysis for transportation because they would be within the 250,000 acres assumed treated annually and would have similar conditions to the cumulative setting due to their proximity to the treatable landscape and the use of the same roadways. As noted in the PEIR, the cumulative analysis would generally be based on the number of projects using the same roadways as the project. The PEIR found that, given the scattered locations of the vegetation projects and the limited duration of work at any one location, it is unlikely that cumulative impacts would occur (CalVTP Final PEIR Section 4.4.14, page 4-24). Implementation of SPRs also reduces the contribution of the project to any potentially cumulative impact, regardless of whether the use of the roadways is inside or outside the treatable landscape. Therefore, the cumulative transportation impact analysis for the proposed project, including the areas outside the treatable landscape, is the same as described in the PEIR and is not cumulatively considerable for Impact TRANS-1 and TRANS-2. The PEIR found that impacts are cumulatively considerable for Impact TRANS-3 and, while the VMTs from the project would be minor, they would still contribute to the significant cumulative impact—in spite of the recognition that a net VMT reduction could be reasonably expected to occur in the long term and that impacts from individual vegetation treatments would likely be less than significant pursuant to the thresholds identified in OPR's Technical Advisory on Evaluating Transportation Impacts. The proposed project, however, given its limited duration and location, would not result in a cumulatively considerable contribution to an otherwise significant cumulative effect.

#### **New Transportation Impacts**

The site-specific characteristics of the proposed project are consistent with the applicable environmental and regulatory conditions presented in the PEIR (refer to Section 3.15.1 Environmental Setting and Section 3.15.2 Regulatory Setting in Volume II of the Final PEIR).

The inclusion of land in the project area that is outside the treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions pertinent to transportation that are present in the areas outside the treatable landscape are essentially the same as those within the treatable

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landscape, as previously described. The use of air curtain burners, carbonators, and kiln burners constitutes a change in treatment type, but the transportation impacts of the additional biomass disposal methods are consistent with the treatment types analyzed in the PEIR and would not result in any new or greater types of transportation impacts. The proposed project is consistent with the types of projects covered in the PEIR. No circumstances would be changed, and the inclusion of areas outside of the treatable landscape would not result in any new significant impact. Therefore, no new impact related to transportation would occur.

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## 3.15 Public Services, Utilities and Service Systems

### 3.15.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact UTIL-1: Result in physical impacts associated with provision of sufficient water supplies, including related infrastructure needs?	LTS	Section 3.16.1 pp. 3.16-2–3.16-3; Impact UTIL-1 p. 3.16-9	yes	NA	NA	LTS	no	yes
Impact UTIL-2: Generate Solid Waste in Excess of State Standards or Exceed Local Infrastructure Capacity?	PSU	Section 3.16.1 pp. 3.16-3–3.16-5; Impact UTIL-2 pp. 3.16-10–3.16-12	yes	AD-3, UTIL-1	NA	LTS	no	yes
Impact UTIL-3: Comply with federal, state, and local management and reduction goals, statutes, and regulations related to solid waste?	LTS	Section 3.16.2 pp. 3.16-6–3.16-7; Impact UTIL-2 p. 3.16-12	yes	AD-3, UTIL-1	NA	LTS	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

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New public services, utilities, and service systems impacts: Would the treatment result in other impacts to public services, utilities, and service systems that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.15.2 Discussion

##### Impact UTIL-1

The proposed project would remove eucalyptus trees and develop and maintain a fuels reduction and forest health restoration zone through use of manual treatments, ground-based mechanical treatments, prescribed herbivory, and targeted herbicide application as well as biomass disposal, including pile burning and, potentially, use of an air curtain, carbonator, or kiln burner. A minimal amount of water would be required for fire suppression during pile burning activities and for dust control during mechanical treatments. Depending on the location of the pile burning or mechanical treatments, water would be supplied via nearby fire hydrants or be transported via fire trucks. The potential increased demand for water was examined in the PEIR (CalVTP Final PEIR Section 3.16.3 page 3.16-9) and was found to be a less-than-significant impact. This impact is within the scope of the activities and impacts addressed in the PEIR because the amount of water and the water source are consistent with those analyzed in the PEIR. The water usage constitutes a minimal demand on local water providers. Implementation of the project treatments would not result in a physical impact associated with provision of sufficient water supplies, including related infrastructure needs, and this impact would be less than significant. No SPRs are applicable to this impact.

The project area includes lands that are outside the treatable landscape, which constitutes a minor change to the geographic extent presented in the PEIR. Within the project area, the existing conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because the water service providers would be the same. This impact would also be less than significant and within the scope of the PEIR because the water use and the water providers would be essentially the same within and outside the treatable landscape. The treatment activities and intensity of the treatments would be consistent with those analyzed in the PEIR. Therefore, the impact to water providers would be the same and would be less than significant, as previously described. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The inclusion of an air curtain, carbonator, or kiln burner as a biomass processing method constitutes a change to the treatment types presented in the PEIR but would not result in additional water use because the use of alternate biomass treatment options is comparable with the use of pile burning for biomass disposal and, therefore, would not result in additional use of water compared with the uses assumed in the PEIR. Use of air curtains, carbonators, and kiln burners would be consistent with the discussion in the PEIR and would not constitute a new or substantially more significant impact than what is analyzed in the PEIR.

### 3 PSA CHECKLIST

#### Impact UTIL-2

Manual and mechanical treatments to remove eucalyptus would generate biomass. Biomass generated by mechanical and manual treatments would be processed by chipping and hauling, chipping and broadcasting, mulching using a tracked masticator, kiln burning, air curtain burning, pile burning, or the use of a carbonator. The cut vegetation materials may be processed in a variety of ways if off-hauled, including but not limited to use in pyrolysis-biomass conversion or enhanced composting. The chipped biomass would be broadcast on site, with chipped materials cut to under 3 inches in size, and applied at a depth of 2 to 4 inches at most to minimize wildfire risk. The remaining biomass that could not be broadcast on site would be hauled off site to West Marin Compost, Redwood Landfill, or Marin Resource Recovery Center or another appropriate biomass processing facility. The cubic yards of material disposed of each workday from a single treatment area would vary and the exact volume is unknown which is consistent with the analysis in the PEIR. The potential to generate solid waste in excess of state standards was examined in the PEIR (CalVTP Final PEIR Section 3.16.3 page 3.16-10 – 3.16-12) and was found to be a less than significant impact. This is because SPRs AD-3 and UTIL-1 would apply to this this potential impact. AD-3 requires the project proponent to design and implement the project consistent with local plans and ordinances, and UTIL-1 requires the project proponent to prepare a Solid Organic Waste Disposition Plan to guide biomass disposal once the estimate of the amount of biomass that would be transported offsite is known. The potential biomass impact is within the scope of the activities and impacts identified in the PEIR as the conditions for removing biomass are consistent with the analysis in the PEIR. This impact of generating solid waste in excess of state standards or exceeding local infrastructure capacity was identified as potentially significant and unavoidable in the PEIR due to the possibility of generating waste in excess of infrastructure capacity and reflects CEQA's mandate of good-faith disclosure of all potential effects.

Locally, West Marin Compost, Redwood Landfill, or Marin Sanitary Transfer Service Station facilities indicate they have available capacity to receive the project's solid organic waste and also have the ability to transport it to composting facilities. West Marin Compost has the permitted capacity to receive 200 cubic yards of organic material per day (California Integrated Waste Management Board 2011). Redwood Landfill has the permitted capacity to receive 2,140 tons of solid waste per day (Marin County Environmental Health Services 2019b). Marin Sanitary Transfer Station has the permitted capacity to receive 2,640 tons per day of waste and a permitted traffic volume of 1,170 vehicles per day (Marin County Environmental Health Services 2019a). Therefore, the impact on solid waste disposal would be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than identified in the PEIR. The MWPA is participating in a local effort called the Marin Biomass Project that, funded by the Governor's Office of Planning and Research, to study potential pathways for biomass utilization in Marin County. Recommendations resulting from this 2-year study could inform future strategies to manage solid organic waste from the GRVSFB and other projects.

### 3 PSA CHECKLIST

The inclusion of land that is outside of the treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, the land included has essentially the same environmental conditions as those assessed within the treatable landscape, a similar amount of biomass material for disposal would result, with the use of the same local facilities for disposal. The same SPRs would be implemented to ensure consistency with local plans and ordinances and ensure a disposition plan. Therefore, the impact generated from solid waste in excess of state standards outside the treatable landscape would be less than significant. The proposed project entails a lesser impact than that of the statewide program, and the determination is consistent with the PEIR and would not constitute a substantially more significant impact than identified in the PEIR.

The use of air curtains, carbonators, and kiln burners would be comparable with the treatment activities that are analyzed in the PEIR—namely, pile burning—and would not result in additional volume of solid waste. Use of air curtains, carbonators, and kiln burners would be consistent with the discussion in the PEIR and would not constitute a new or substantially more significant impact than what was analyzed in the PEIR.

#### **Impact UTIL-3**

Project treatments, as a result of eucalyptus removal within the project are, would generate biomass, which would be disposed of by chipping and hauling, chipping and broadcasting, mulching using a tracked masticator, kiln burning, air curtain burning, pile burning, or the use of a carbonator. The potential to conflict with federal, state, and local waste management requirements was examined in the PEIR (CalVTP Final PEIR Section 3.16.3 page 3.16-12) and was found to be a less-than-significant impact. The biomass that remains after pile burning, other biomass processing methods, and broadcasting would be transported to West Marin Compost, Redwood Landfill, or Marin Sanitary Transfer Service Station facilities, or a local use for the chips would be investigated. As discussed under Impact UTIL-2, the locations have sufficient permitting capacity to receive the input from the project. The proposed project was evaluated for compliance with the federal, state and local goals related to solid waste as examined in the PEIR. The project would apply SPR UTIL-1, which requires a Solid Organic Waste Disposition Plan. In addition, SPR UTIL-1 would be applied to the proposed project, which would ensure that the project proponent prepares a Solid Organic Waste Disposition Plan prior to initiating treatment activities. The proposed project is within the scope of activities and impacts identified in the PEIR.

The inclusion of land outside the treatable landscape constitutes a minor change to the geographic extent of the PEIR. However, the environmental conditions outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent, would generate a similar amount of solid waste, and would use the same waste disposal facilities. Therefore, the impact related to compliance with federal, state, and local goals and regulations regarding solid waste would be less than significant. Although the proposed project entails a lesser impact than that of the statewide program, the determination is consistent with the PEIR and would not constitute a substantially more severe impact than identified in the PEIR.

### 3 PSA CHECKLIST

The inclusion of an air curtain, carbonator, and kiln burner as a biomass processing method constitutes a change to the treatment types presented in the PEIR but would not result in any additional volume of solid waste and would comply with federal, state, and local management and reduction goals, statutes, and regulations. The use of an air curtain, carbonator, and kiln burner would be comparable with the treatment activities that are presented in the PEIR—namely, pile burning—and would substantially reduce the amount of solid waste. Use of an air curtain, carbonator, and kiln burner would be consistent with the discussion in the PEIR and would not constitute a new or substantially more severe significant impact than what was analyzed in the PEIR.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed project would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope for public services, utilities, and service systems is the treatable landscape (CalVTP Final PEIR Section 4.4.15, page 4-25). The inclusion of treatment areas outside the treatable landscape would expand the geographic scope for the cumulative analysis, but as with the vegetation treatment activities within the treatable landscape, it would not result in an impact to public services because it would result in a minimal amount of additional water use. Treatment activities would result in an increase in solid organic waste transported off site for processing but, as previously noted, the waste facilities would not exceed existing infrastructure capacities. Use of alternative disposal methods, such as transporting waste to composting sites or using pile burning, would further reduce the waste transported to typical waste treatment facilities. The PEIR identifies potential for a cumulatively significant impact. The proposed project's contribution to cumulative impact to public service, utilities, and service systems, however, would not be cumulatively considerable and would be consistent with the analysis in the PEIR.

#### **New Impacts to Public Services, Utilities, and Service Systems**

The site-specific characteristics of the proposed project have been considered and found to be consistent with the applicable environmental and regulatory conditions presented in the PEIR (refer to Section 3.16.1 Environmental Setting and Section 3.16.2 Regulatory Setting in Volume II of the Final PEIR). The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as described above. The use of an air curtain, carbonator, and kiln burner also constitutes a change in treatment type that is consistent with the types analyzed in the PEIR. Therefore, the impacts of the proposed treatment project are also consistent with those covered in the PEIR. No circumstances would be changed, and the inclusion of areas outside of the treatable landscape as well as addition of biomass treatment options would not give rise to any new significant impacts not addressed in the PEIR. Therefore, no new impact related to public service, utilities, and service systems would occur that is not covered in the PEIR.

### 3 PSA CHECKLIST

## 3.16 Wildfire

### 3.16.1 Checklist

Environmental impact covered in the PEIR	Identify impact significance in the PEIR	Identify location of impact analysis in the PEIR	Does the impact apply to the treatment project?	List SPRs applicable to the treatment project	List MMs applicable to the treatment project	Identify impact significance for treatment project	Would this be a substantially more severe significant impact than identified in the PEIR?	Is this impact within the scope of the PEIR?
Impact WIL-1: Substantially exacerbate fire risk and expose people to uncontrolled spread of a wildfire	LTS	Section 3.17.1; Impact WIL-1 pp. 3.17-14–3.17-15	yes	HAZ-2, HAZ-3, HAZ-4	NA	LTS	no	yes
Impact WIL-2: Expose people or structures to substantial risks related to post-fire flooding or landslides	LTS	Section 3.17.1; Impact WIL-2 pp. 3.17-15–3.17-16	yes	HAZ-2, HAZ-3, HAZ-4	NA	LST	no	yes

NA: Not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

None: There are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the proposed project.

### 3 PSA CHECKLIST

New wildfire impacts: Would the treatment result in other impacts to wildfire resources that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, provide explanation in discussion.
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#### 3.16.2 Discussion

##### Impact WIL-1

The primary goal of the proposed project is to remove eucalyptus and create a WUI fuels reduction area to provide improved site access for firefighter and equipment staging in the event of a fire as well as to reduce the intensity of or slow down the spread of wildfires or to mitigate the threat of wildfires to surrounding communities. The proposed project would also create ecological resiliency in these areas and would be designed to improve habitat quality and create a landscape appearance closer to pre-fire-suppression conditions. Treatments would include prescribed burning, pile and other biomass treatment options, and mechanical treatments, which could result in temporary risks associated with uncontrolled wildfire and accidental wildfire ignition. The potential increase in exposure to wildfire during implementation of treatments was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.17.3, pages 3.17-13–3.17-14). Increased wildfire risk associated with pile burning and use of heavy equipment in vegetated areas is within the scope of the PEIR. SPRs HAZ-2, HAZ-3, and HAZ-4 would be implemented to reduce the risk of exposure to wildfire by requiring spark arrestors on mechanical hand tools, smoking would be prohibited in vegetated areas, and crews would carry one fire extinguisher per chainsaw. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than covered in the PEIR.

The inclusion of land in the project area that is outside the treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent and have a similar wildfire risk profile, and the type of equipment and treatment duration of the proposed project outside the treatable landscape are consistent with those analyzed in the PEIR. The same SPRs would be required to reduce the risk of wildfire. Therefore, the wildfire impact would be the same and less than significant, as previously described.

If an air curtain burner, kiln burner, or carbonator were used, the impacts of wildfire risk would be similar to, but less than, the those for the use of pile burning for biomass processing. If an air curtain burner, kiln burner, or carbonator were used, this would reduce the wildfire risk because the burning would be contained in aboveground structure. Additionally, the additional biomass disposal methods include defined burn chambers where the fire is contained and can be quickly extinguished if necessary (Shapiro 2002). This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than analyzed in the PEIR.

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#### **Impact WIL-2**

Initial and maintenance treatments would include pile burning, mechanical treatment using heavy equipment, and prescribed herbivory. The potential for post-fire flooding and landslides was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.17.3, pages 3.17-14–3.17-15). Treatment would generally occur on slopes of greater than 35 percent as much of the area is steep. The proposed project would comply with SPR GEO-8, which requires an RPF or geologist to evaluate treatment areas with slopes of greater than 50 percent for unstable areas and soils. Implementation of SPRs GEO-3 and GEO-5 would stabilize soil disturbed during mechanical and prescribed herbivory treatments and drain compacted and/or bare linear-treatment areas capable of generating storm runoff via water breaks. The project proponent would also inspect all treatment areas for the proper implementation of erosion control SPRs and mitigations (SPR GEO-4) to minimize potential for landslides. Within the overall treatment area, the proposed project treatments would retain up to 50 percent of existing vegetation, which would help to maintain stability of the soil, ensuring impacts would be less than significant and within the scope of the PEIR. Some portions of overgrown eucalyptus removal may constitute removal of 50 percent of existing vegetation, but the stumps of the trees would mostly remain to stabilize the soil, and native vegetation would be left and encouraged to reclaim the areas.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a minor change to the geographic extent presented in the PEIR. However, within the project area, the post-fire landslide risk is essentially the same within and outside the treatable landscape because they are adjacent, and the slopes and risk of post-fire flooding or landslides would be similar. Therefore, the wildfire impact outside the treatable landscape would be the same and less than significant, as described above, with implementation of the same SPRs. The impact outside the treatable landscapes would be consistent with the lands analyzed in the PEIR.

The inclusion of an air curtain burner, kiln burner, and carbonator as a biomass disposal method constitutes a change to the treatment types presented in the PEIR but would result in similar impacts as pile burning. If the biomass disposal methods included an aboveground structure, it would not result in an increased risk of post-fire flooding or landslide because the burning would occur within the chamber on disturbed land or pavement. Therefore, the impact would be consistent with the treatments analyzed in the PEIR.

#### **Cumulative Impacts**

As noted in the CalVTP PEIR (CalVTP Final PEIR Section 4.1.1, page 4-1), impacts of the proposed CalVTP would occur within and proximate to approximately 250,000 annually treated acres that are located within the 20.3-million-acre treatable landscape. The geographic scope for wildfire is the treatable landscape and adjacent areas because impacts related to wildfire (i.e., uncontrolled spread of wildfire or post-fire flooding or landslides) are location specific, and only projects within or adjacent the treatable landscape could combine to result in cumulative wildfire impacts (CalVTP Final PEIR Section 4.4.16, page 4-26). Because the project area lands outside the treatable landscape are proximate to those within the treatable landscape, they fall within the geographic scope identified within the PEIR. As noted in the PEIR, while the

### 3 PSA CHECKLIST

treatments could result in short-term increase in fire risk from prescribed burning, in this case— pile burning and other biomass treatment options—the proposed project would reduce overall wildfire risk and would have a beneficial effect related to wildfire. The PEIR does not identify potentially cumulatively significant impacts to wildfire, and the proposed project’s contribution to wildfire risk would be consistent with the analysis in the PEIR and would not be cumulatively considerable. Therefore, burning under the proposed project would be consistent with the PEIR and would not expose people or structures to substantial risks from post-pile-burning landslides or flooding, and the proposed project’s contribution to impacts related to post-fire flooding or landslides from implementation of treatment activities would not be cumulatively considerable.

#### **New Impacts to Wildfire**

The site-specific characteristics of the proposed project have been considered and found to be consistent with the applicable regulatory and environmental conditions presented in the PEIR (refer to Section 3.17.1 Regulatory Setting and Section 3.17.2 Environmental Setting in Volume II of the Final PEIR). The project proponent has also determined that the inclusion of land in the project area that is outside the treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the project area, the existing environmental and regulatory conditions pertinent to wildfire that are present in the project area outside the treatable landscape are essentially the same as those within the treatable landscape, as described above. The use of an air curtain burner, kiln burner, and carbonator constitutes a change in treatment type that is consistent with the types analyzed in the PEIR. Therefore, the impacts of the proposed treatment project are consistent with those analyzed in the PEIR. No circumstances would be changed, and the inclusion of areas outside of the treatable landscape would not result in any new significant impacts not addressed in the PEIR. Therefore, no new impact related to wildfire risk would occur that is not covered in the PEIR.

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