CalVTP PROJECT-SPECIFIC ANALYSIS
AND PWP COASTAL VEGETATION TREATMENT STANDARDS

Skylark Ranch Forest Health Project

Resource Conservation District of Santa Cruz County
CalVTP Project ID: 2021-18

March 2022

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Skylark Ranch Forest Health Project

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LIST OF ABBREVIATIONS

CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal IPC	California Invasive Plant Council
CalVTP	California Vegetation Treatment Program
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CVTS	Coastal Vegetation Treatment Standards
dbh	diameter at breast height
DPR	Department of Pesticide Regulation
EPA	U.S. Environmental Protection Agency
ESHA	Environmentally Sensitive Habitat Areas
GHG	greenhouse gas
LTS	Less than significant
LTSM	Less than significant with mitigation
MM	Mitigation Measure
NA	Not applicable
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NI	No impact
NOA	naturally occurring asbestos
NPPA	Native Plant Protection Act
NWIC	Northwest Information Center
PEIR	Program Environmental Impact Report
PSA	Project-Specific Analysis
PSU	Potentially significant and unavoidable
PWP	Public Works Plan
RCD	Resource Conservation District of Santa Cruz County
RWQCB	Regional Water Quality Control Board
SOD	Sudden Oak Death
SPR	Standard Project Requirements
SR	State Route
SRA	State Responsibility Area

SU	Significant and unavoidable
SWRCB	State Water Resource Control Board
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
WLPZ	Watercourse and Lake Protection Zones
WUI	Wildland Urban Interface

CHAPTER 1 INTRODUCTION

1.1 SETTING

Wildfires have taken a considerable toll on many communities across California. Land managers, researchers, and foresters predominantly agree on the factors that have led to recent large-scale fires: limited application of cultural and prescribed burning, a lack of vegetation management, climate change, including successive periods of drought, and extensive development into the wildland-urban interface (WUI). The results of these factors are overstocked forests and surrounding vegetation types at high risk for wildfire ignition.

Several priority projects were developed in 2019 by the Resource Conservation District of Santa Cruz County (RCD) and its partners, including the California Department of Forestry and Fire Protection (CAL FIRE) San Mateo – Santa Cruz Units and public and private landowners. Skylark Ranch, a Girl Scout Camp located in western Santa Cruz County, was included as one of the priority projects. Due primarily because of decades of fire suppression, there was a build of vegetative material, creating suboptimal forest health functions. These unhealthy forest characteristics were determined to pose a high threat of future catastrophic fire. The 2020 CZU Lightning Complex burned extensive areas of densely populated vegetation within Skylark Ranch with moderate to high burn severity and left behind large amounts of unconsumed, dead and dying trees. Consequently, the excessive buildup of fuels has degraded habitat and ecosystem function through increased competition for space and resources, while also creating increased vulnerability to future catastrophic fires. This increased vulnerability threatens recovering communities that may not have sufficient time to recover or reproduce between catastrophic events.

The resulting dead and dying material increases the fuel loads available for future fires as well as presents hazards within Skylark Ranch, preventing the camp from resuming operations. Accordingly, the RCD is proposing to implement the Skylark Ranch Forest Health Project (proposed project or project), which would treat vegetation to improve habitat conditions and ecosystem function of the vegetation communities within the treatment area and increase safety, which would allow the camp to resume operations. The location of the project is shown on Figure 1-1.

1.2 CEQA AND COASTAL ACT COMPLIANCE

The Program Environmental Impact Report (PEIR) for the California Vegetation Treatment Program (CalVTP) was certified by the California Board of Forestry and Fire Protection in 2019. It evaluates the potential environmental effects of implementing qualifying vegetation treatments to reduce the risk of wildfire throughout the State Responsibility Area (SRA) in California. It was designed for use by many state and local agencies and special districts to accelerate vegetation treatment project approvals by finding them to be within the scope of the PEIR through the preparation of a Project-Specific Analysis (PSA). The PSA must demonstrate that the proposed activities align with those in the CalVTP, the effects of proposed vegetation treatment were analyzed in the PEIR, and Standard Project Requirements (SPRs) and Mitigation Measures from the PEIR will be integrated into the treatment to avoid and minimize impacts.

The CalVTP PEIR provides a streamlined mechanism for California Environmental Quality Act (CEQA) compliance for vegetation treatment projects. The RCD's certified Public Works Plan (PWP) is a companion to the CalVTP that provides a streamlined mechanism for Coastal Act compliance within the Coastal Zone of Santa Cruz County through the submittal and approval of Notice of Impending Developments, or NOIDs. The PWP requires adherence to the Coastal Vegetation Treatment Standards (CVTS) approved as part of the PWP and additional information about project design within the Santa Cruz County Coastal Zone. This PSA addresses the components of the CalVTP as required pursuant to CEQA and includes information that responds to the CVTS as required pursuant to the Coastal Act and PWP. Direct response to the CVTS for the proposed project can be found in Appendix F of this PSA.

As defined by the CalVTP process, the RCD is the project proponent. For purposes of CEQA compliance, the RCD serves as the responsible agency. The California Coastal Commission is responsible for reviewing the PSA and

response to the CVTS, and determining whether the proposed project is consistent with the PWP. Coastal Commission review of a proposed project is deemed complete on the date of a Commission determination that the project is consistent with the PWP.

1.3 SKYLARK RANCH GIRL SCOUT CAMP

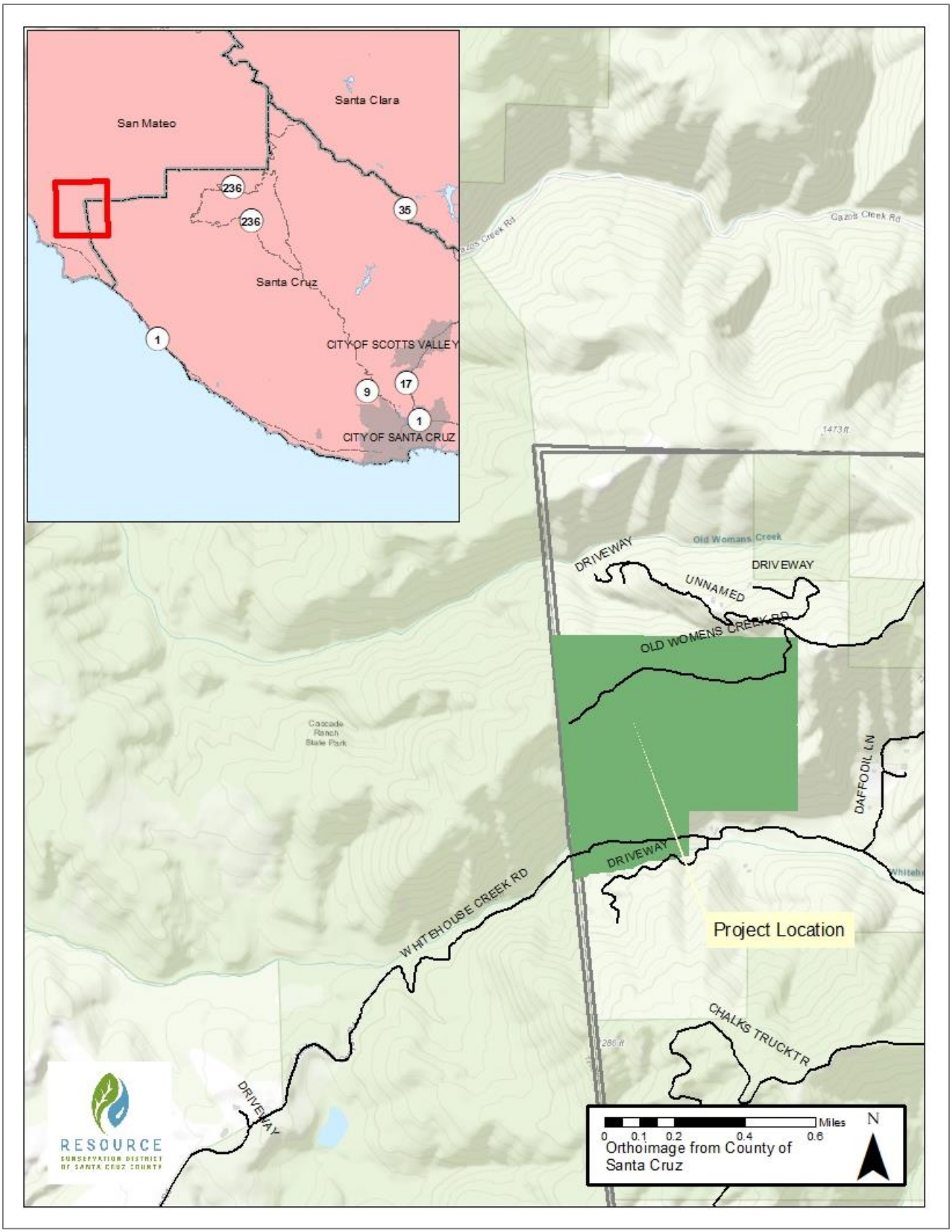
The 2020 CZU Lightning Complex burned the majority of the vegetation within White House Canyon, including Skylark Ranch, with ranging severities from low to high burn severity and left behind large amounts of unconsumed, dead and dying trees and other materials (see Figure 1-2 and 1-3). Vegetation that was present prior to the 2020 CZU Lightning Complex is shown in Figure 1-4. The project treatment area at Skylark Ranch was severely burned and tree mortality of Douglas fir (*Pseudotsuga menziesii)*, tanoak (*Notholithocarpus densiflorus*), and madrone (*Arbutus menziesii*) in the treatment area is expected to be between 60 and 90 percent. Some larger diameter oak trees will likely survive with a high degree of damage and reduced fitness. There is a small area of redwoods (*Sequoia sempervirens*) where there is expected to be between 75 to 95 percent mortality. Many redwoods greater than 12 inches diameter at breast height (dbh) in this area have a much higher chance for long-term survival.

The buildup of dead and dying material following the 2020 CZU Lightning Complex has degraded conditions in the treatment area. Removing dead, dying, and irreversibly diseased trees as well as thinning of small diameter live trees would increase the growth potential and carbon storage capacity in the residual stand. As a project funded through a CAL FIRE Forest Health Grant and consistent with the objectives of the CalVTP, the primary goal of the project is ecological restoration following the 2020 CZU Lightning Complex.

Figure 1-2 shows the impaired, burned forest conditions at Skylark Ranch that the proposed project seeks to address. The project would conduct ecological restoration treatments to restore ecosystem processes, conditions, and resiliency over 40 acres within Skylark Ranch. Through the removal of vegetation, the ecological restoration treatments would increase the site's carrying capacity for stand volume, which in turn would increase the growth and vigor of remaining live trees. Trees that pose a threat to the future use of the camp such as hazard trees, dead or dying trees, irreversibly diseased trees, substantially damaged trees, as well as invasive species would also be removed. Ecological restoration treatments would be implemented using manual and mechanical treatment methods, including equipment such as a feller-buncher and skid steer, to selectively remove live trees less than 12 inches dbh, reduce ladder fuels by pruning, and to remove dead, dying, and irreversibly diseased trees. Herbicides would also be used to remove invasive vegetation that colonizes the treatment area post-fire, where necessary to achieve the goals of the treatment. Implementing ecological restoration treatments would modify existing fuels to support native vegetative species regeneration and to restore habitat conditions including, but not limited to habitat quality and natural fire processes.

The RCD would also create 20-acres of shaded fuel breaks along Old Woman's Creek Road and access roads with heavy brush. The shaded fuel breaks would prevent or slow the spread of future wildland fires to structures and surrounding natural resources. The shaded fuel break would also provide emergency responders an opportunity to control or contain wildfires through the modification of flammable vegetation and support a healthy and fire-resilient residual forest stand. Dead, dying, and hazard trees burned in the 2020 CZU Lightning Complex would be removed from these areas. The creation of the shaded fuel breaks would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, and chippers. Herbicides would also be used to remove invasive vegetation where necessary to achieve the goals of the treatment.

The project was designed to be both cost-effective and to avoid and minimize resource impacts. Meeting the State's goals to increase the pace and scale of forest health treatment in response to current climatic conditions requires balancing all available tools and techniques in consideration of safety, cost, available workforce, efficiency, and environmental factors. Accordingly, manual treatments (i.e., handwork) would be utilized in areas where sensitive resources are identified; however, mechanical treatments are needed in locations identified through resource analysis and qualified professional evaluation to meet the goals of this project while considering the aforementioned safety, cost, and efficiency factors.



Source: Provided by RCD of Santa Cruz County in 2021

Figure 1-1 Project Location

Source: Photograph taken by Ascent Environmental in 2021.

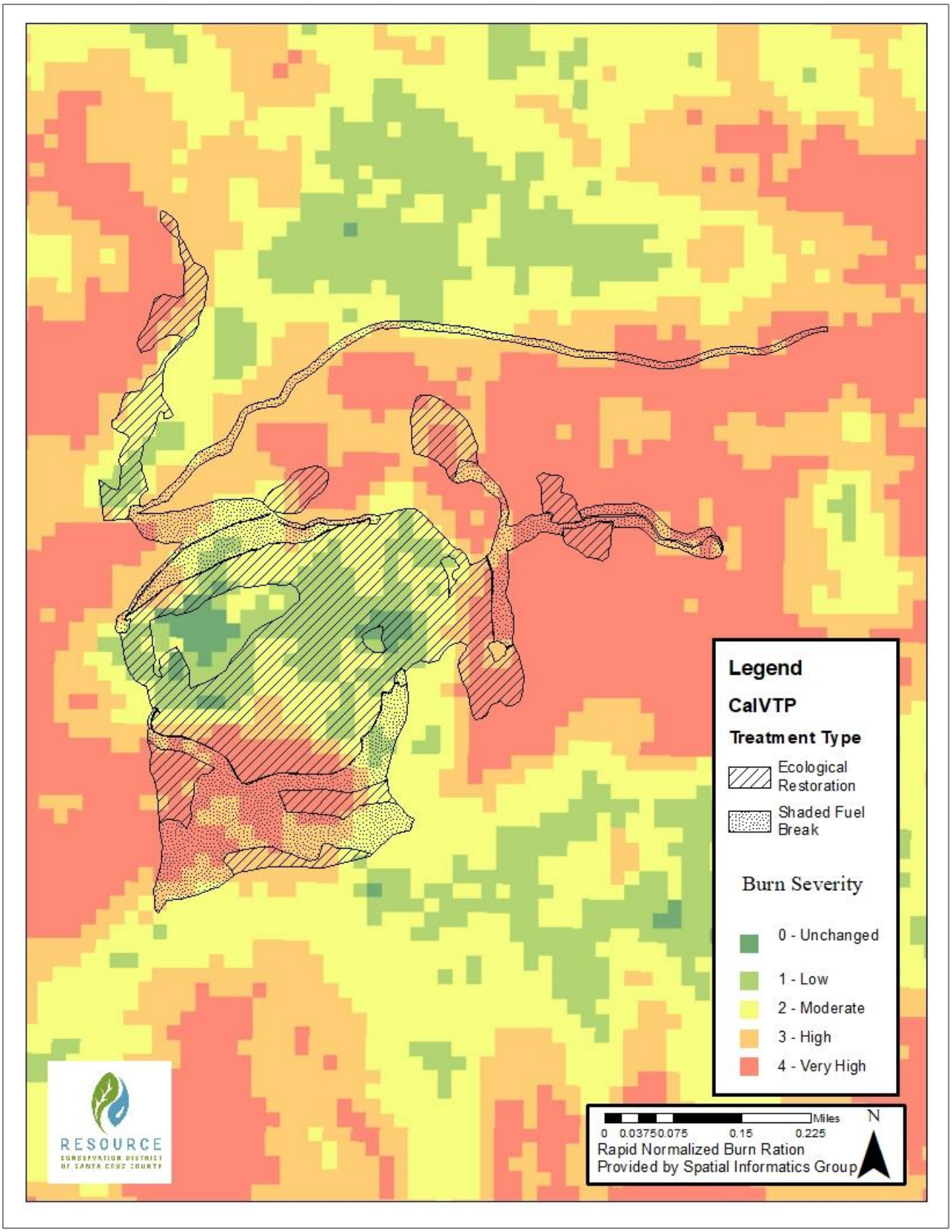
Source: Photograph taken by Ascent Environmental in 2021.

Figure 1-2 Skylark Ranch Existing Conditions

Source: Photograph taken by Ascent Environmental in 2021.

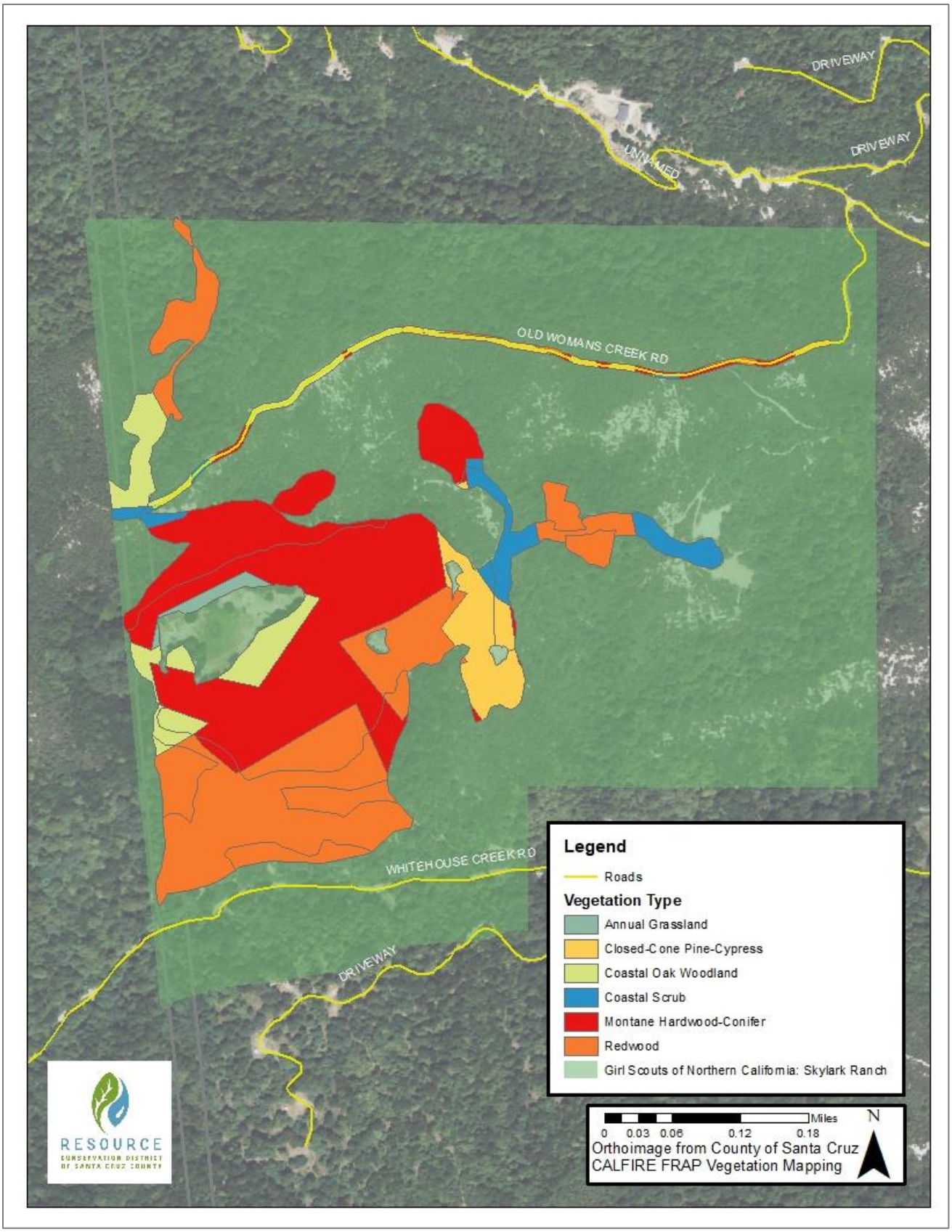
Source: Photograph taken by Ascent Environmental in 2021.

Figure 1-2 Skylark Ranch Existing Conditions (continued)



Source: Provided by RCD of Santa Cruz County in 2022 (based on 2020 data downloaded from Spatial Informatics Group)

Figure 1-3 2020 CZU Lightning Complex Burn Severity in the Proposed Treatment Area



Source: Provided by RCD of Santa Cruz County in 2022 (based on 2020 FRAP data)

Figure 1-4 Vegetation in the Proposed Treatment Area Prior to the 2020 CZU Lightning Complex

1.4 PROJECT JUSTIFICATION

Through a collaborative effort between the RCD, CAL FIRE, consulting local Registered Professional Foresters, and property owners, the condition of the treatment area was evaluated and determined to have considerable forest health impairments and hazardous conditions prior to and following the 2020 CZU Lightning Complex (see Section 1.1, "Setting," and Figures 1-2 and 1-3). These impairments currently occur throughout the forested lands within the burned area; the area of focus for this project is Skylark Ranch, a girl scout camp in White House Canyon.

Extensive planning went into this project to develop ecologically restorative treatments as well as the creation of shaded fuel breaks to prevent or slow the spread of future wildland fires and provide emergency responders an opportunity to control or contain wildfires. The Skylark Ranch treatment area development phase began by analyzing where sensitive resource areas were located (e.g., watercourses, steep slopes, sensitive vegetation communities/species, etc.). These types of resources were mapped and specific areas with increased feasibility and efficacy of treatment (e.g., less steep slopes, ridges, and areas away from watercourses, etc.) were field verified for access, to evaluate the level of impaired forest condition, and to consider treatment options. Once this step was complete, the field-verified treatment polygons (shown on Figure 2-1 below) were created with proposed vegetation treatments that are economically viable and ecologically restorative, while also promoting community protection to the Girl Scouts of Northern California and surrounding residents on White House Creek Road.

Many more acres at Skylark Ranch and in the rest of the Santa Cruz Mountains would benefit from the treatments described in this PSA. Given resource limitations, collaborative landscape-scale prioritization is needed to advance wildfire resilience. Prioritization of treatment areas occurred for Skylark Ranch to achieve optimum benefits, including ecologically restorative treatments, protection of sensitive resources, reduction of fuels for community protection, worker safety, and economic feasibility of project planning, permitting, and implementation.

Standard project requirements (SPRs) are resource protection measures identified in this PSA to provide avoidance and minimization of potential adverse effects. Measures include: biological and botanical surveys, bird nesting surveys (if operations occur from February 1st to August 31st), mechanized operations only on slopes less than 50 percent, no heavy equipment operations in proximity to a watercourse, canopy and native vegetation retention requirements, control of invasive species, specific measures to reduce the spread of forest pathogens such as sudden oak death, preparation of an archaeological survey report, requirements to follow local policies and provide public noticing, and a pre-operational training with the contractors to advise them of resource issues.

CHAPTER 2 PROJECT DESCRIPTION

The Skylark Ranch Forest Health Project (project or proposed project) consists of vegetation treatments at Skylark Ranch Girl Scout Camp (Skylark Ranch) in western Santa Cruz County. It is located approximately 2.5 miles east of State Route (SR) 1, 14.5 miles southeast of the city of Pescadero, and 26.6 miles northwest of the city of Santa Cruz (refer to Figure 1-1). The CalVTP treatments would occur within multiple treatment areas totaling 60 acres, all of which are within Santa Cruz County. The vegetation treatments are intended to reduce potential vegetative ignition sources, improve the forest's health and vigor, and improve the capacity for emergency response and wildfire suppression during a wildfire.

The CalVTP treatment types that would be implemented are ecological restoration and shaded fuel breaks, and the proposed treatment activities to implement the project are manual and mechanical treatments and herbicide application. The proposed CalVTP treatment areas are shown in Figure 2-1 and are summarized in Table 2-1, below.

Table 2-1 Proposed CalVTP Treatments

CalVTP Treatment Type	Treatment Description	CalVTP Treatment Activity	Treatment Size (acres)	Equipment Used for Treatments	Timing of CalVTP Treatments
Ecological Restoration	Habitat improvement/fire resiliency treatments	Manual and mechanical (cutting and masticating), and cut stump or foliar spray of herbicides	40	Chainsaws and/ or other mechanized hand tools, masticator, feller-buncher, skid steer, chipper (to chip biomass)	May 2022 – August 2022
Shaded Fuel Break	Treatment of areas along Old Woman's Creek Road and access roads with heavy brush	Manual and mechanical (cutting, masticating, and mowing), and cut stump or foliar spray of herbicides	20	Masticator, feller-buncher, skid steer, chainsaws, chipper (to chip biomass)	May 2022 – August 2022
Total Acres			60		

Source: Provided by RCD of Santa Cruz County in 2021

A masticator, feller-buncher, skid steer as well as chainsaws and other hand-held tools would be utilized to remove understory vegetation; dead or downed material; hazard trees; dead, dying, and irreversibly diseased trees; and live trees up to 12 inches diameter at breast height (dbh). Manual treatment crews would also utilize chainsaws and other hand-held tools to prune trees and woody vegetation and buck downed debris and materials. All material would be masticated or chipped, described in section 2.3, "Biomass Disposal," below. Herbicide application may be utilized to eliminate the spread and re-sprouting of invasive species in the treatment areas predominately along roads and trails.

Initial treatments would occur over approximately 40 days, beginning in May 2022. However, the timeframe may change in the event of delays, such as weather. Treatment crews would consist of up to 10 people working within the treatment area at any one time. Treatment vehicle and equipment staging would occur within the designated treatment area. All work would occur during daytime hours.

2.1 CalVTP TREATMENT TYPES

2.1.1 Ecological Restoration

The vegetation treatment areas have experienced a range of burn severities, from low to high, during the 2020 CZU Lightning Complex. Following the fire, much of the understory vegetation was not fully consumed and has added to the dry vegetative fuel load. The proposed project would implement ecological restoration treatments for the dual

benefit of wildfire risk reduction and enhancement of natural habitats, particularly given the burned condition of much of the landscape. Consistent with the CalVTP ecological restoration treatment type, the RCD's proposed ecological restoration treatments would seek to return the landscape closer to natural conditions where natural fire processes can be reestablished and habitat quality can be improved, including controlling, and eliminating nonnative, invasive plants and excess buildup of fire fuel. Specific restoration objectives include restoring the natural ecosystem processes, conditions, and resiliency through the removal of dense understory fuels and invasive species, and reintroduction of native species through tree planting in areas generally outside the Wildland Urban Interface (WUI), as defined in the CalVTP PEIR (CalVTP Final PEIR Volume II pages 2-7, 2-15, and 2-16).

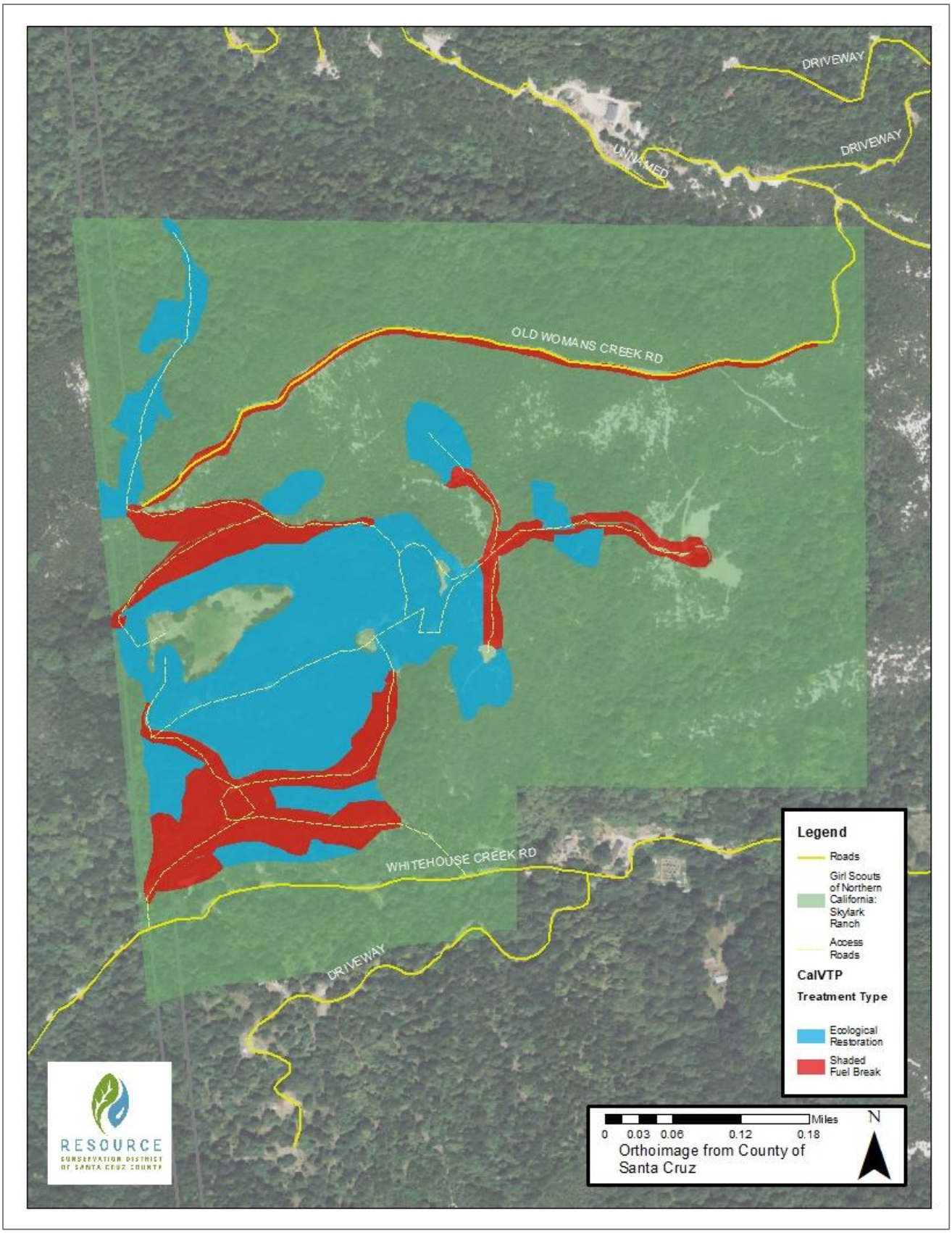
Ecological restoration treatments would occur over 40 acres of the treatment area and would be implemented using manual and mechanical treatment methods, including chainsaws and/or other mechanized hand tools, as well as masticators, skid steers, feller bunchers and chippers. Herbicides may also be used to prevent the growth of invasive vegetation. The goal of the ecological restoration treatments within forested habitats is to establish an open, healthy and diverse understory by allowing sunlight to penetrate to the forest floor after removing dead and dying trees and thinning smaller diameter trees. This understory would be composed of a mosaic of vegetation that would support wildlife habitats and the regeneration of native species. Forest growth that exceeded 600 stems per acre prior to the 2020 CZU Lightning Complex would be reduced to approximately 200 stems per acre of mid-range and larger diameter trees, which research has shown to provide the most flexibility for future planning while managing a third growth coast redwood forest (Webb et al., 2017). Remaining trees would extend their heights and expand their crowns, becoming more vigorous and able to resist manifestations of climate change while reducing the continuity of hazardous ladder fuels to the canopy. Implementing ecological restoration treatments would result in a modification of existing fuels that would provide excellent conditions for planting redwood seedlings and ultimately support native vegetative species regeneration to restore habitat conditions including, but not limited to habitat quality and natural fire processes. Ecological restoration treatments would focus on removing dead and dying vegetation, thinning small diameter live trees (i.e., less than 12 inches dbh), and understory vegetation to increase the site's carrying capacity for stand volume, which in turn would increase the growth and vigor or the remaining trees (Skovsgaad 2009).

The excessive buildup of vegetation and dead and dying material following the 2020 CZU Lightning Complex has degraded conditions. Removing dead, dying, and irreversibly diseased trees and thinning of trees less than 12 inches in diameter at breast height, is expected to increase the growth and carbon storage capacity in the residual stand.

2.1.2 Shaded Fuel Break

In the past, areas along Old Woman's Creek Road functioned as a fuel break, but this fuel break was not actively maintained. This project proposes to reinstall and maintain a 10-acre shaded fuel break along Old Woman's Creek Road, as well as create another approximately 10 acres of shaded fuel breaks within forested habitats along roads and trails within the treatment area, including the Girls Scouts of Northern California's driveway, access roads, and walking trails, including the access road to the horse paddock and access to water systems (see Figure 2-1). As defined in the CalVTP PEIR, fuel breaks remove zones of vegetation to support fire suppression efforts and passively interrupt the path of a fire (CalVTP Final PEIR Volume II page 2-7 and 2-11 through 2-13).

Old Woman's Creek Road connects White House Creek Canyon to Old Woman's Creek Canyon and Gazos Creek Canyon. Implementing a shaded fuel break along the ridgetop to the north of the Skylark Ranch property would reduce the threat of catastrophic wildfire to the camp and would protect the surrounding community members that live in these three rural canyons. The shaded fuel breaks would provide emergency responders the opportunity to control or contain wildfires through the modification of flammable vegetation while supporting a healthy and fire resilient residual forest stand through retaining the majority of the overstory canopy to maintain the shade that will reduce the potential for rapid re-growth of understory vegetation. The shaded fuel breaks would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, skid steers, and feller bunchers. Herbicides may also be used to prevent the growth of invasive vegetation.



Source: Provided by RCD of Santa Cruz County in 2021

Figure 2-1 Proposed CalVTP Treatments

2.2 CalVTP TREATMENT ACTIVITIES

The proposed project would implement ecological restoration and fuel break treatments for the purposes of wildfire risk reduction and the enhancement of natural habitats and forest functions. The vegetation treatment activities that would be used are manual and mechanical treatments, and herbicide application. Each of these activities are described in more detail below.

2.2.1 Mechanical Vegetation Treatment

Mechanical treatments would occur on up to 60 acres and would primarily include skidding, masticating, and chipping target vegetation. Mechanical treatment activities would occur predominately on slopes below 40 percent, along ridges, and may occur on slopes greater than 40 percent by using equipment that can reach target vegetation from existing road infrastructure. Masticators would be used to remove dense stands of understory vegetation and ladder fuels and maintain a healthy overstory. As stated in the CalVTP PEIR Section 2.5.2, mechanical treatments may cut, uproot, crush/compact, or chop existing vegetation through the use of masticators and other methods of application. Understory vegetation, brush, and shrubs under the drip lines of trees shall be cut and masticated leaving root systems intact for resprouting. Understory debris would be chipped and scattered onsite within the treated areas, following best management practices for reducing the spread of pests, disease, and invasive species (see Section 2. 5, "Pests, Disease, and Invasive Species" below).

Generally, treatments would:

- remove dead and dying vegetation;
- remove invasive trees, all sizes (e.g., Eucalyptus);
- remove or masticate target vegetation 12 inches dbh or less;
- retain logs greater than 12 inches with preference for retaining the largest logs and those with cavities, for a total of an average of approximately 10 tons per acre; for Douglas fir 12 inches dbh, 10 tons is approximately 29 whole downed trees per acre, and for Douglas fir 24 inches dbh, 10 tons is approximately five whole down trees per acre;
- to maintain sufficient upland and dispersal habitat for California red-legged frog, the retention of downed woody debris and large snags with cavities will be maximized to the greatest extent possible while still meeting project objectives to create opportunities for emergency responders to control or contain wildfires; and restore natural ecosystem processes, conditions, and resilience through the removal of targeted dense understory fuels and invasive species;
- retain snags greater than 12 inches dbh at an average density of 1-2 per acre. Preference will be given to retaining the largest trees and trees with cavities, that are not hazard trees;
- retain herbaceous vegetation, except for targeted nonnative plant species, in a mosaic pattern in forest and shrub communities;
- retain riparian species (e.g., elderberry);
- in forested habitats, retain native shrubs with 25-50 feet of space between crowns, where shrub crown is approximately 10-15 feet wide. Spacing may be closer than 25 feet on level ground as needed to maintain the defined membership rules of existing vegetation alliances, and greater than 50 feet on steeper ground to mitigate wildfire behavior or near structures for structure protection; and
- a minimum of 50 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density. Treatments will retain naturally occurring vegetation alliances.

2.2.2 Manual Vegetation Treatment

Manual treatments would be implemented on approximately 10 acres and could be used on up to 60 acres (i.e., manual and mechanical treatments may be used in combination). To implement manual treatments, hand tools and hand-operated power tools, including chainsaws, would be used to cut, clear, or prune herbaceous or woody species and ladder fuels. Manual treatments would occur predominately on slopes less than 40 percent; however, some manual treatments would occur on steep sleeps between approximately 40-50 percent. The same general guidelines for tree and vegetation removal and retention would be followed as described above for mechanical treatments.

2.2.3 Herbicide Application

Herbicides would be used to prevent the spread and the re-sprouting of invasive species in the treatment areas, predominately along roads. During the initial treatments, herbicide use would be used to control invasive vegetation and prevent regrowth of invasive tree species, such as Tasmanian blue gum (*Eucalyptus globulus*), after their removal. Other target vegetation includes French broom and pampas grasses. Herbicide application would also occur over the treatment areas during maintenance treatments to control regenerating invasive understory vegetation if it is determined to be the least environmentally disturbing activity to aid in reaching future desired conditions. A certified pesticide applicator was consulted to determine the list of potential herbicides and application methods that would be used for the project.

Consistent with the CalVTP (CalVTP Final PEIR Volume II pages 2-27 and 2-28), the herbicides proposed for use are glyphosate, triclopyr, and hexazinone. Herbicides would only be applied directly by hand via cut stump, spot, or foliar spray. Herbicide application would 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. Use of herbicides would be excluded from areas with open water bodies. In addition, both glyphosate and triclopyr are subject to the California Red-Legged Frog Injunction (Center for Biological Diversity v. U.S. EPA [2006] Case No. 02-1580-JSW), and therefore, specific application requirements apply. For localized spot treatments using handheld devices on roadsides and in forests, the application of glyphosate and triclopyr are prohibited within 60 feet of California red-legged frog aquatic breeding critical habitat or non-breeding aquatic critical habitat within critical habitat areas or within 60 feet of aquatic features within the non-critical habitat sections subject to the injunction (EPA 2021). The RCD would comply with all laws and regulations governing the use of herbicides.

2.3 BIOMASS DISPOSAL

The proposed mechanical vegetation treatments described above will mulch much of the vegetative debris using a masticator and place it on the ground concurrently with vegetation removal. Additional biomass generated from the CalVTP treatments would primarily be disposed of by chipping. Chipping locations would be prioritized at previously disturbed sites, such as roads and trails. Remaining chips would be used in staging areas and may be spread in the treatment area if needed. Chips would not exceed 4 inches in depth in any area. In addition, chipped biomass would not be placed in waters of the State, Waters of the U.S., or other sensitive habitats. The remaining biomass (approximately 5 percent) would be lopped and scattered within the treatment areas.

2.4 TREATMENT MAINTENANCE

Following initial treatment, site conditions are expected to have a clear, open understory that would promote a healthier, more vigorous forest. Increasing the space between the overstory will create a mosaic of understory vegetation that would support wildlife habitats and the regeneration of native species. Maintenance treatment intervals would be dependent on the re-establishment rate of the understory species and would be triggered by the occurrence of dense, continuous understory and ladder fuels, which will be identified during ongoing monitoring by the RCD and would be adaptively managed.

Maintenance treatments would be conducted through the implementation of mechanical and manual treatments to treat hazard trees, understory vegetation and ladder fuels, and reduce the reestablishment of invasive species. Herbicides would also be used to treat invasive species as needed, as described under Section 2.2.3, "Herbicide Application" above. All maintenance treatments would occur during daytime hours.

All maintenance treatments implemented under this PSA will be supervised and overseen by the project proponent. Maintenance treatments are expected to occur on an annual basis by the landowner. Periodic maintenance is expected to occur as needed, determined by qualified RCD staff who will monitor the project over the lifetime of the PSA as explained under Item #15 in Chapter 3 of this PSA. When implementing future maintenance treatments, the collaborating landowner would be required to implement treatments consistent with this PSA, CVTS, and the mitigation measures and SPRs in the Mitigation Monitoring and Reporting Program (MMRP) if they are using the PWP for Coastal Act compliance. In this circumstance, the RCD will be responsible for ensuring that the treatments conducted by the landowner are implemented consistent with all applicable SPRs and mitigation measures and reporting and coordination is completed pursuant to the RCD's obligations under the PWP.

2.5 PESTS, DISEASE, AND INVASIVE SPECIES

The pathogen, *Phytophthora ramorum*, commonly referred to as Sudden Oak Death (SOD), infects coastal forests throughout California and Oregon and kills susceptible species including tanoak, coast live oak, California black oak, Shreve's oak, canyon live oak, and madrone saplings. Host species that are in the treatment area include, but are not limited to California bay laurel, coast redwood, and Douglas fir. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, all hand equipment and boots worn by treatment crews will be sanitized and heavy equipment hosed off prior to operations in areas where the spread of SOD is possible. The California Oak Mortality Task Force website contains additional information regarding treatment and disposal measures for plants infected with SOD, which would be monitored for changes in SOD treatment recommendations (http://www.suddenoakdeath.org/).

The fungal disease, *Fusarium circunatum*, commonly referred to as Pitch canker, affects many pine species and can infect Douglas-fir. Most pines native to California are susceptible to pitch canker, but Monterey pine, *Pinus radiata*, is the most widely affected host. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, the same measures as described above to prevent the spread of SOD would be implemented. The Pitch Canker Task Force has additional information regarding treatment and guidelines for handling woody material infected by pitch canker fungus, which would be monitored for changes. in pitch canker treatment recommendations (https://ufei.calpoly.edu/pitch-canker-task-force/).

French broom, *Genista monspessulana*, is a problematic invasive species due to its ignitability, ability to carry fire into tree canopies, shading out seedlings, and replacing the native plants and forage species. This species has a large seed bank and re-sprouts readily from the root after cutting, freezing, and fire (Cal IPC 2020). The California Invasive Plant Council (Cal IPC) recommends pulling French broom to remove the entire plant including its roots to eliminate re-sprouting. The removal of this species is a priority due to its increased fire hazard, the longevity of its seedbank, and adverse impacts to habitat and aesthetics. Additional information about French broom control and treatments is located on the Cal IPC website, which would be monitored for changes in French broom treatment recommendations (https://www.calipc.org/plants/profile/genista-monspessulana-profile/ and https://wric.ucdavis.edu/information/natural%20areas/wr_G/Genista.pdf).

SPR BIO-6 would be implemented to prevent the spread of pathogens from areas identified as zones of infestation to non-infested areas. Specific measures include training on plant pathogens during the worker awareness trainings that would occur prior to treatment, minimizing the movement of soil and non-target plant materials (including invasives) during treatments, and cleaning and sanitizing hand tools, boots, clothing, vehicles, and mechanized equipment before arriving at a treatment site, prior to leaving a contaminated treatment site, and when moving from high risk to low risk areas.

CHAPTER 3 ENVIRONMENTAL CHECKLIST

VEGETATION TREATMENT PROJECT INFORMATION

1. Project Title:	Girl Scouts of Northern California – Skylark Ranch Forest Health Project
2. CalVTP I.D. Number:	2021-18
3. Project Proponent Name and Address:	Resource Conservation District of Santa Cruz County (RCD) 820 Bay Avenue, Suite 136 Capitola, CA 95010
4. Contact Person Information and Phone Number:	Matt Abernathy, Forest Health/Wildfire Resiliency Program Specialist (831) 464-2950 x 28, mabernathy@rcdsantacruz.org
5. Project Location:	3001 Whitehouse Creek Rd, Pescadero, CA 94060, approximately 2.5 miles east of State Route (SR) 1, accessible from SR 1 via White House Creek Road. USGS Franklin Point Quadrangle, California, T9S, R4W, and Portions of Sections 4 and 9. Latitude (Y): 37.17436 Longitude (X): -122.30740 See Figure 1-1
6. Total Area to be Treated (acres)	Approximately 60 acres

7. Description of Project:

See Chapter 2, "Project Description," above for a detailed description of the proposed project.

Problem Statement

The forests in the Santa Cruz Mountains have largely changed over the past two centuries, due to historic logging practices, land development, and in large part decades of fire suppression. The lack of natural process in these forests has resulted in excessive fuel buildup and infestation of invasive plant species that are out-competing native vegetation. These conditions, coupled with extreme drought, a warming climate, arid site-adapted conifer species displacing hardwoods and other sensitive species are reducing biodiversity and altering natural fire regimes. The result has been damaging to this ecosystem and will require environmentally sensitive management to redirect the path of changing climates and adverse ecological conditions.

Most notably for San Mateo and Santa Cruz County in 2020, the CZU Lightning Complex burned 86,509 acres, destroyed 1490 buildings, and exhibited extreme fire behavior. Initial estimates suggest that over 50 percent of the impacted area burned at high fire severities. The lack of natural processes, fire suppression, fuel build up, and invasive species infestations described above provided ideal conditions for the extreme fire behavior and extensive damage that resulted from the 2020 CZU Lightning Complex. Many forested stands that were topographically exposed to the extreme fire weather resulted in extensive tree mortality and habitat losses that will take decades to recover.

As described above in Section 1.3, "Skylark Ranch Girl Scout Camp," vegetation at Skylark Ranch exhibits unhealthy forest characteristics that are susceptible to disease and catastrophic wildfire. Prior to the 2020 CZU Lightning Complex, forest stands at Skylark Ranch exhibited unhealthy characteristics (e.g., excessive ladder fuels, overly dense mid-diameter trees) that were susceptible to disease and a catastrophic wildfire. Coastal scrub portions of Skylark Ranch may have been outside of the natural fire return interval based on the last recorded fire in the area being in 1962 (San Mateo County and Santa Cruz County 2018) and the natural fire return interval for coastal scrub communities in the regions, as described in the CalVTP PEIR and Manual of California Vegetation, being between 20 to 70 years, depending on the specific vegetation alliances and associations present. Following the 2020 CZU Lightning Complex, some of the excessive and overly dense vegetation remains unconsumed in forested portions of the treatment area, resulting in a lack of proper ecosystem function and degraded habitat. In other portions of the treatment area, the 2020 CZU Lightening Complex resulted in an abundance of dead and dying material that increases the fuel loads available for future fires and presents fall hazards and potential obstacles for the ingress and egress of campers and camp staff. Tree mortality for Douglas fir, tanoaks, knobcone pine, and madrones in the treatment area are expected to be between 60 and 100 percent. Some larger diameter oak trees will likely survive but most likely with a high degree of damage. There is a small area of redwoods that are expected to experience between 75 to 95 percent mortality. Many redwoods greater than 12-inches diameter at breast height (dbh) in this area have a much higher chance for long-term survival. In general, the redwood forest within Skylark Ranch exhibits ecologically resilient characteristics as evidenced by the post-burn survival of scattered old growth trees and remnants of a diverse understory. Without treatment, it is anticipated that the re-establishment of vegetation within Skylark Ranch would result in unhealthy ecosystem conditions (e.g., overly dense trees) similar to what was present prior to the 2020 CZU Lightning Complex.

Goal Statement

This project supports the intent of CAL FIRE's Forest Health Program goals, California's climate goals, and the goals of the California Coastal Commission (CCC) for Environmentally Sensitive Habitat Areas (ESHA) where ecological restoration treatment types may occur to:

- Proactively restore forest health, improve ecosystem resiliency, and conserve working forests by conducting ecologically minded forest health treatments.
- Protect state water supply sources by strategically implementing ecological restoration projects across priority watersheds.
- Encourage the long-term storage of carbon in forest trees and soils through the reduction of dense understory thus promoting larger healthier stands of mature trees.
- Minimize the loss of forest carbon from large, intense wildfires, through reduction of ladder fuels and brush resulting from years of fire suppression.
- Promote public safety, health, and welfare and protect public and private property through the implementation of ecologically restorative fuel reduction treatments in the wildland urban interface.

The goal of the ecological restoration treatments within forested habitats is to establish an open, healthy, and diverse understory by allowing sunlight to penetrate to the forest floor after removing dead and dying trees and thinning smaller diameter trees. This understory would be composed of a mosaic of vegetation that would support wildlife habitats and the regeneration of native species. The overstocked forest, in excess of 600 stems per acre prior to the 2020 CZU Lightning Complex, would be reduced to approximately 200 stems per acre of mid-range and larger diameter trees, which research has shown to provide the most flexibility for future planning while managing a third growth coast redwood forest (Webb et al., 2017). Remaining trees would extend their heights and expand their crowns, becoming more vigorous and able to resist manifestations of climate change while reducing the continuity of hazardous ladder fuels to the canopy. The goal of ecological restoration treatments in coastal scrub and chaparral communities is to allow for natural post fire re-establishment and successional stages of vegetation alliances that existed prior to the 2020 CZU Lightning Complex. The future desired condition consists of multiple age classes and spacing of native shrubs that will, through ongoing maintenance treatments over the life of

the PSA, approximate conditions of healthy, mature reference stands of the vegetation alliances determined to be present once post-fire regrowth has occurred to the extent that vegetation can be identified to the alliance level according to the Manual of California Vegetation.

The goal of the shaded fuel break treatments is to remove dead but unconsumed trees, many in the 2-to-20-inch dbh classes and provide emergency responders the opportunity to control or contain wildfires through the modification of flammable vegetation. Treatments would also support a healthy and fire resilient residual forest stand through retaining the majority of the overstory canopy to maintain the shade that will reduce the potential for rapid re-growth of understory vegetation.

The desired condition following treatment would be re-establishment of the existing vegetation communities and appropriate seral-stage communities within the treatment area, at densities that reflect natural processes that have been altered by the history of logging and fire suppression. Environmental protections, including SPRs and mitigation measures, would be implemented by the project proponent and reported through the Mitigation Monitoring and Reporting Program developed as part of an approved PSA under the CalVTP PEIR.

8. Treatment Types

- ☐ Wildland-Urban Interface Fuel Reduction
- ☒ Fuel Break
- ☒ Ecological Restoration

9. Treatment Activities

- ☐ Prescribed Burning (Broadcast), _____ acres
- ☐ Prescribed Burning (Pile Burning)
- ☒ Mechanical Treatment, up to 60 acres
- ☒ Manual Treatment, up to 60 acres
- ☐ Prescribed Herbivory, _____ acres
- ☒ Herbicide Application, up to 60 acres

10. Fuel Type

- ☐ Grass Fuel Type
- ☒ Shrub Fuel Type
- ☒ Tree Fuel Type

11. Geographic Scope

- ☒ The treatment area is entirely within the CalVTP treatable landscape
- ☐ The treatment area is NOT entirely within the CalVTP treatable landscape

12. Regional Setting and Surrounding Land Uses:

The treatment area is located at Skylark Ranch Girl Scout Camp, who the project proponent has partnered with and the landowner is in agreement with the proposed project. The property is in Santa Cruz County and is accessible from SR 1 via Whitehouse Canyon Road. It is bound by West Waddell Creek State Wilderness and Big Basin Redwoods State Park forests to the east and south, Butano State Park is located to the north, and the coastline is approximately 2.5 miles to the west. The city of Pescadero is located approximately 6 miles northwest of the treatment area.

The elevation of the treatment area ranges from approximately 500 feet to 1,330 above sea level. The property contains several Class III watercourses. The southern boundary of Skylark Ranch is bordered by and overlaps with White House Creek, a Class I watercourse. The vegetation within Skylark Ranch is composed of forests dominated by second growth coastal redwood, Douglas fir, and mixed hardwood forests. The understory is composed of native brush and shrub species, such as huckleberry, poison oak, and manzanita. French broom is a common invasive species located within the treatment area. The area surrounding the project is primarily forested, although due to the 2020 CZU Lightning Complex, much of the forested areas were burned and are currently composed of dead or dying trees and are susceptible to increased colonization by non-native, invasive species due to ground disturbance and loss of shaded overstory. Surrounding land uses include recreational land to the south, east, and northeast and scattered rural communities or private properties are located to the north, west and south.

13. Other Public Agencies Whose Approval is Required:

The proposed project is within the Coastal Zone, as defined by the California Coastal Act, and described in SPR AD-9 in the CalVTP PEIR (CalVTP Final PEIR Volume II page 2-34), and therefore requires approval by the CCC. Communication and coordination between the CCC, RCD, and the County of Santa Cruz has allowed for the development and certification of a PWP in lieu of a coastal development permit through the creation of the Coastal Vegetation Treatment Standards (CVTS) (Appendix F). Project approval is subject to the review and issuance of a NOID. The CCC received a draft Skylark Ranch Forest Health Project PSA for their review on January 28, 2022. Prior to submitting the PSA, RCD staff conducted a site visit to the Skylark Ranch treatment area with CCC staff on October 15, 2021. A follow up conference call with CCC staff was held on November 9, 2021. During this meeting, the treatment approach for the project was discussed, including existing site conditions, a description of the initial and maintenance treatments, and the proposed approach to the analysis.

CAL FIRE and the County of Santa Cruz also attended the site visit on October 15, 2021 and received the draft Skylark Ranch Forest Health Project PSA for review on January 28, 2022.

The California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) were consulted during the planning phase of this project. Memos describing the project and measures that are included to avoid and minimize impacts to special-status species and habitat were provided to CDFW and USFWS and are included as Appendix C (CDFW Consultation Memo) and Appendix D (USFWS Consultation Memo) to this PSA. A site visit occurred with USFWS on January 4, 2022, and a conference call with CDFW took place on February 4, 2022.

14. Native American Consultation.

The Board of Forestry and Fire Protection completed consultation pursuant to Public Resources Code Section 21080.3.1 during preparation of the CalVTP PEIR; however, CalVTP SPR CUL-2 includes a requirement for further tribal coordination during PSA preparation. Consistent with CalVTP SPR CUL-2, a list of geographically affiliated Native American representatives was obtained from the Native American Heritage Commission (NAHC) on November 7, 2021. On behalf of the RCD, Ascent sent seven emails and one letter on December 1, 2021, inviting each Native American representative to consult on the proposed project. An additional letter was sent on December 3, 2021 to Ms. Arellano because her inbox was full. To date, no responses have been received from any Native American tribes. Refer to Section 4.4, "Archaeological, Historical, and Tribal Cultural Resources," for more information.

15. Use of the PSA for Treatment Maintenance.

The proposed project would include maintenance treatments that will be implemented, as needed, after vegetation re-establishment following the initial vegetation treatments. Maintenance of the areas treated under the proposed project would involve the same vegetation treatment activities used in the original treatment (i.e., manual and mechanical treatments) and would also involve removing invasive plant species (e.g., French broom) and weeds though targeted herbicide application. See Chapter 2, "Treatment Maintenance" and "Herbicide Application," for additional details.

Prior to initiating maintenance treatments, the project proponent will verify that the site conditions described in the PSA and the analysis in the PSA are still substantially similar to conditions in the field. If the project proponent determines that field conditions have substantially changed to the degree that a new significant or substantially more severe significant environment effect would occur due to the changed site condition and/or proposed treatments, the project proponent would determine whether updates to this PSA, a new PSA, or other environmental analysis is warranted. The project proponent would update the PSA, develop a new PSA, or prepare the appropriate CEQA document at that time.

Separately, the PWP provides Coastal Act compliance for the project, subject to the review and approval of a NOID. The project will be authorized for a minimum of 3 years, with the possibility of being authorized for the life of the PWP (i.e., 10 years from PWP certification). After 10 years, the RCD would work with the CCC to review and amend the PWP, as required, to extend the Coastal Act compliance mechanism, including through the reissuance of a new, or extension of the existing, NOID. Although future treatments would have CEQA coverage through this PSA, the RCD would not implement treatments without complying with the Coastal Act.

16. Standard Project Requirements and Mitigation Measures.

☒ All applicable SPRs and Mitigation Measures are feasible and will be implemented

☒ There is NO new information which would render mitigation measures previously considered infeasible or not considered in the CalVTP PEIR 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)

DETERMINATION (To be completed by the project proponent)

On the basis of this PSA and the substantial evidence supporting it:

☒ I find that all of 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 proponent 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.

DocuSigned by:
Jim Mckenna
F7171EA7346C400...
Signature

3/15/2022
Date

James McKenna
Printed Name

Board President
Title

Resource Conservation District of Santa Cruz County
Agency

CHAPTER 4 PROJECT-SPECIFIC ANALYSIS

4.1 AESTHETICS AND VISUAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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	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	None	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	--	--	--	--	--

[1] LTS = less than significant; SU = significant and unavoidable.

[2] 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 treatment project.

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?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.1.1 Discussion

IMPACT AES-1

Initial and maintenance treatments would be implemented using manual and mechanical treatments activities and targeted application of herbicides. Biomass disposal would primarily consist of masticating and chipping biomass and placing it on the ground concurrently with vegetation removal. These activities could result in short-term degradation of a scenic vista or visual character or quality of public views from the presence of large equipment and vehicles in the treatment area. The potential for these treatment activities to result in short-term degradation of visual character was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.2-16 through 3.2-19).

There are no designated state scenic highways in the vicinity of the treatment area, and the Skylark Ranch girl scout camp is currently closed. No campers or staff would be present to experience short-term impacts. However, the proposed treatments may be visible from public hiking trails that are part of West Waddell Creek State Wilderness and Big Basin State Park located south and west of the treatment area. Consistent with the PEIR, the presence of large mechanical equipment could contrast with the natural environment where publicly visible, such as adjacent to a public trail or roadway. However, the visibility of treatment implementation would be temporary and would not dominate a view or block any views from scenic vistas. It also would not substantially degrade the existing visual character or quality of the area given that the treatment activities would be limited in geographic extent. The potential for the project to result in short-term substantial degradation of the visual character of the project area is within the scope of the PEIR, because the proposed treatment activities and types of equipment proposed for use are consistent with those analyzed in the PEIR. SPR AES-2 would be applicable to the proposed project, which requires the project proponent to store all treatment-related materials, including vehicles, vegetation treatment debris, and equipment, outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AES-2

Initial treatments would include the ecological restoration and shaded fuel break treatment types, and maintenance treatments would be implemented, as needed, to maintain the initial treatments. The potential for these treatment types to result in long-term substantial degradation of the visual character of a treatment area was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.2-20 through 3.2-22).

Portions of the treatment area would be publicly visible from recreation areas, such as trails, as described under Impact AES-1, as well as by visitors of the camp when in operation. However, consistent with the PEIR, the proposed ecological restoration treatments would seek to return the landscape to a more natural condition. The unhealthy conditions prior to the 2020 CZU Lightning Complex, which consisted of densely populated stands and crowded understories, led to the excessive buildup of vegetation and dead and dying material in the treatment area following the fire, including treatment areas that can be viewed from the public. Ecological restoration treatments would focus on removing dead and dying vegetation, thinning small diameter live trees (i.e., less than 12 inches dbh), and understory vegetation. They would be implemented on approximately 40 acres of the treatment area and result in a modification of existing fuels that would provide ideal conditions for planting redwood seedlings and ultimately support native vegetative species regeneration to restore habitat conditions, which would ultimately improve views of the treatment area. In addition, the project would create approximately 20 acres of shaded fuel breaks along existing roads and trails within the treatment area. Because the majority of the overstory canopy would be maintained, the creation of these shaded fuel breaks would not substantially contrast with the surrounding forested treatment area. Biomass would be chipped or masticated and spread throughout the treatment areas. For these reasons, the project would not substantially degrade public views, and no SPRs are necessary to maintain this impact at less than significant. The potential for the project to result in long-term substantial degradation of the visual character the project area is within the scope of the PEIR, because the proposed treatment type and activities are consistent with

those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AES-3

This impact does not apply to the proposed project because no non-shaded fuel breaks would be created.

NEW AESTHETIC AND VISUAL RESOURCE IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they 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 RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to aesthetics and visual resources would occur that is not covered in the PEIR.

4.2 AGRICULTURE AND FORESTRY RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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

[1] LTS = less than significant.

[2] 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 treatment project.

New Agriculture and Forestry Resource Impacts: Would the treatment result in other impacts to agriculture and forestry resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.2.1 Discussion

IMPACT AG-1

Initial and maintenance treatments would be implemented using manual and mechanical treatments activities and targeted application of herbicides. The treatment area is forested land currently comprised of predominately dead and dying trees. The potential for the proposed treatment types and treatment activities to result in the loss of forestland or conversion of forestland to non-forest use was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.3-7 and 3.3-8).

Initial treatments would seek to return the landscape closer to natural conditions where natural fire processes can be reestablished and habitat quality can be improved, including controlling, and eliminating nonnative, invasive plants and excess buildup of fire fuel. A masticator, feller-buncher, skid steer as well as chainsaws and other hand-held tools would be utilized to remove understory vegetation; dead or downed material; hazard trees; dead, dying, and irreversibly diseased trees; and live trees up to 12 inches dbh. In addition, approximately 20 acres of shaded fuel breaks would be created, which would retain the majority of the overstory canopy. Maintenance treatments would occur as needed to maintain the initial treatments. Consistent with the PEIR, the vegetation remaining after initial and maintenance treatments would meet the definition of forestland as defined in Public Resources Code Section 12220(g), and no loss of

forestland or conversion to non-forest uses would occur. Therefore, because the proposed treatment types and activities are consistent with those analyzed in the PEIR, the potential for the project to result in the loss or conversion of forestland is within the scope of the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW AGRICULTURE AND FORESTRY RESOURCE IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are 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 RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to 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.

4.3 AIR QUALITY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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	AQ-1 AQ-4	AQ-1	SU	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	NA	LTS	No	Yes
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	No	--	--	--	--	--
Impact AQ-5: Expose People to Objectionable Odors from Diesel Exhaust	LTS	Impact AQ-5, pp. 3.4-37 – 3.4-38	Yes	AQ-1 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; pp. 3.4-38	No	--	--	--	--	--

[1] LTS = less than significant; SU = significant and unavoidable.

[2] 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 treatment project.

New Air Quality Impacts: Would the treatment result in other impacts to air quality that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.3.1 Discussion

IMPACT AQ-1

The use of vehicles and equipment during initial and maintenance vegetation treatments and biomass disposal would result in emissions of criteria pollutants that could exceed California ambient air quality standards (CAAQS) or national ambient air quality standards (NAAQS) thresholds. The potential for emissions of criteria pollutants to exceed CAAQS or NAAQS thresholds was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.4-26 through 3.4-33). Emissions of criteria air pollutants as a result of vehicle and equipment use, as well as biomass disposal, would be potentially significant and is within the scope of the PEIR because the size of treatment crews, the types of equipment, and the duration of equipment use would be consistent with those analyzed in the PEIR. The SPRs applicable to the proposed project are SPR AQ-1 and SPR AQ-4. Emission reduction techniques included in Mitigation Measure AQ-1 would be infeasible for the project proponent to implement because funding for project implementation is limited and prioritizes the removal of dead, dying, and hazard trees currently present in the treatment area. It would be cost prohibitive to use equipment meeting the latest efficiency standards, including meeting the U.S. Environmental Protection Agency's Tier 4 emission standards, using renewable diesel fuel, using electric- and gasoline-powered equipment, and using equipment with Best Available Control Technology. In addition, the implementation of the project would reduce long-term impacts to air quality by reducing the amount of vegetative fuels available to burn in future wildfires. Therefore, this impact would remain unavoidable and potentially significant for the same reasons explained in the PEIR, but for the reasons explained above, would not constitute a substantially more severe significant impact.

IMPACT AQ-2

The use of vehicles and equipment during initial and maintenance vegetation treatments and biomass disposal could expose people to diesel particulate matter emissions if present in or immediately adjacent to the treatment area. The potential to expose people to diesel particulate matter emissions during vegetation treatments was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.4-33 and 3.4-34).

Initial and maintenance treatments would occur in a remote Girl Scout Camp in the Santa Cruz Mountains. There is one caretaker residence on the Skylark Ranch property; however, due to the 2020 CZU Lightening Complex, the residence will not be occupied during initial treatments. The caretaker could be onsite during maintenance treatments. However, all treatments would occur during the off season when campers are not present onsite. Consistent with the PEIR, because of the short and intermittent nature of treatment activities (e.g., initial treatments occurring over approximately 40 days), that treatment activities would occur in an area without many people (e.g., residences, schools), and treatments would move throughout the treatment areas and not take place in the same location for an extended period of time, treatment activities would not expose any person to an incremental increase in cancer risk associated with diesel particulate matter greater than 10 in one million or a Hazard Index of 1.0 or greater. Diesel particulate matter emissions from the proposed treatments would be within the scope of the PEIR, because the types and amount of equipment that would be used, as well as the duration of use during proposed treatments, are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are AQ-1, HAZ-1, NOI-4, and NOI-5. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AQ-3

Initial and maintenance vegetation treatments would involve mechanical treatment activities and vegetation removal that would result in ground disturbance, which could expose people to fugitive dust emissions containing naturally occurring asbestos (NOA), if present in soils and people are present within or immediately adjacent to active treatments. The potential to expose people to fugitive dust emissions containing NOA was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, page 34-35). According to the California Department of Conservation and

U.S. Geological Survey, NOA is not anticipated to occur in the treatment area (DOC 2010; USGS 2011). In addition, the implementation of SPR AQ-4 would minimize dust emissions as a result of treatment activities.

Initial and maintenance treatments would occur in a remote Girl Scout Camp in the Santa Cruz Mountains. There is one caretaker residence on the Skylark Ranch property. Although the residence would not be occupied during initial treatments, the caretaker could be onsite during maintenance treatments. However, all treatments would occur during the off season when campers are not present onsite. The potential for the project to result in the exposure of people to NOA is within the scope of the PEIR, because the proposed treatment activities and types of equipment proposed for use are consistent with those analyzed in the PEIR. SPR AQ-4 is applicable to the project. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AQ-4

This impact does not apply to the proposed project because no prescribed burning would occur.

IMPACT AQ-5

Use of diesel-powered equipment during initial and maintenance vegetation treatments and biomass disposal could expose people to objectionable odors from diesel exhaust if present within or immediately adjacent to active treatment activities. The potential to expose people to objectionable odors from diesel exhaust was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.4-37 and 3.4-38).

Initial and maintenance treatments would occur in a remote Girl Scout Camp in the Santa Cruz Mountains; there is one caretaker residence on the property; however, no other sensitive receptors are in the immediate vicinity. All treatments would occur when campers are not present onsite, although maintenance treatments could occur when the caretaker is present. Consistent with the PEIR, diesel exhaust emissions would be temporary, would not be generated at any one location for an extended period of time, and would dissipate rapidly from the source with an increase in distance. This impact is within the scope of the PEIR because the equipment that would be used and the duration of use under are consistent with what was analyzed in the PEIR. SPRs applicable to the proposed project are AQ-1, HAZ-1, NOI-4, and NOI-5. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT AQ-6

This impact does not apply to the proposed project because no prescribed burning would occur.

NEW AIR QUALITY IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.4.1, "Environmental Setting," and Section 3.4.2, "Regulatory Setting," in Volume II of the Final PEIR). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to air quality would occur that is not covered in the PEIR.

4.4 ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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-4 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-3 CUL-4 CUL-5 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	NA	LTS	No	Yes
Impact CUL-4: Disturb Human Remains	LTS	Impact CUL-4, p. 3.5-18	Yes	NA	NA	LTS	No	Yes

[1] LTS = less than significant; LTSM = less than significant with mitigation; SU = significant and unavoidable.
[2]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 treatment project.

New Archaeological, Historical, and Tribal Cultural Resource Impacts: Would the treatment result in other impacts to archaeological, historical, and tribal cultural resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.4.1 Discussion

The requirements of SPRs CUL-1 and CUL-3 from the CalVTP PEIR have been met by the cultural resources records search conducted for the proposed project. A cultural resources records search from the Northwest Information Center (NWIC) was completed for the 60 acres that comprise the treatment area. No cultural resources were identified as previously recorded within the treatment area; however, the search also identified that the treatment area has never been previously surveyed for the presence of cultural resources.

Consistent with CalVTP SPR CUL-2, a list of geographically affiliated Native American representatives was obtained from the Native American Heritage Commission (NAHC) on November 7, 2021. On behalf of the RCD, Ascent sent

seven emails and one letter on December 1, 2021, inviting each Native American representative to consult on the proposed project. An additional letter was sent on December 3, 2021 to Ms. Arellano because her inbox was full. No responses were received from any Native American tribes. A November 7, 2021, search of NAHC's sacred lands database returned negative results. A list of the representatives identified by the NAHC and the method of contact and any response received is provided in Table 4.4-1 below.

Table 4.4-1 Geographically Affiliated Native American Representatives Contact Record

Name and Title	Affiliation	Date and Method of Initial Contact	Response Summary
Valentin Lopez, Chairperson	Amah Mutson Tribal Band	December 2, 2021 Email	None to date
Irene Zwierlein, Chairperson	Amah Mutson Tribal Band of Mission San Juan Bautista	December 2, 2021 Email	None to date
Patrick Orozco, Chairperson	Coastanoan Ohlone Rumsen-Mutsen Tribe	December 2, 2021 Email	None to date
Kanyon Sayers-Roods	Indian Canyon Mutsun Band of Coastanoan	December 2, 2021 Letter	None to date
Ann Marie Sayers, Chairperson	Indian Canyon Mutsun Band of Coastanoan	December 2, 2021 Email	None to date
Monica Arellano, Vice Chairwoman	Muwekma Ohlone Indian Tribe of the San Francisco Bay Area	December 2, 2021 Email (in-box full) December 3, 2021 Letter	None to date
Dee Dee Manzanares Ybarra, Chairperson	Rumsen Am:a Tur:ataj Ohlone	December 2, 2021 Email	None to date
Kenneth Woodrow, Chairperson	Wuksache Indian Tribe/Eshom Valley Band	December 2, 2021 Email	None to date

Source: Compiled by Ascent Environmental in 2021.

IMPACT CUL-1

Initial and maintenance vegetation treatment activities would include manual and mechanical treatments and herbicide application. Limbing and topping large woody vegetation and the use of heavy equipment could damage built historical resources if present within the treatment area. The potential for these treatment activities to result in disturbance to, damage to, or destruction of built-environment structures that have not yet been evaluated for historical significance, was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.5-14 and 3.5-15).

According to the NWIC records search, the treatment area has never been surveyed. For this reason, there is a potential for built-environment structures (i.e., buildings, bridges, roadways) over 50 years old to be present that have not been evaluated for historical significance within or immediately adjacent to treatment area. Accordingly, built-environment structures within treatment areas would be identified by qualified archaeologists during archaeological surveys (as required by SPR CUL-4) and avoided per SPR CUL-7, which includes installing exclusion zones and prohibiting mechanical treatments within 100-feet of all built-environment resources. This impact is within the scope of the PEIR, because the treatment activities and the intensity of ground disturbance that would occur under the proposed project are consistent with those analyzed in the PEIR. SPRs applicable to this impact are CUL-1, CUL-7, and CUL-8. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT CUL-2

Initial and maintenance vegetation treatment activities would include mechanical treatments that use heavy equipment that could result in ground disturbance as vegetation is removed; this could result in damage to unique archaeological

resources or subsurface historical resources if present within a treatment area. According to the NWIC records search, no archaeological resources have been previously identified within the treatment area; however, the treatment area has never been surveyed. The potential for these treatment activities to result in disturbance to, damage to, or destruction of such resources was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.5-15 and 3.5-16).

This impact is within the scope of the PEIR, because the treatment activities and the intensity of ground disturbance that would occur under the proposed project are consistent with those analyzed in the PEIR. SPRs applicable to this impact are CUL-1, CUL-3, CUL-4, CUL-5 and CUL-8. Any archaeological resources identified during surveys required pursuant to SPR CUL-4 would be avoided during project implementation or treated as prescribed in SPR CUL-5. Mitigation Measure CUL-2 would be applied to protect any inadvertent discoveries of archaeological resources or subsurface historical resources and has been revised to comply with stricter PWP requirements related to the distance at which activity must cease if there is a discovery. This impact would be less than significant with implementation of mitigation to protect inadvertent resource discovery; this is less severe than the significant and unavoidable impact identified in the PEIR, which was identified as such because the feasibility of protecting inadvertent discoveries throughout the treatable landscape could not be determined with any certainty. Therefore, it is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT CUL-3

As described above, a Native American contact list was obtained from the NAHC, and eight tribal representatives were contacted (see Table 4.4-1). No responses have been received from any Native American tribes to date.

The potential for treatment activities to cause a substantial adverse change in the significance of a tribal cultural resource was examined in the PEIR (CalVTP Final PEIR pp. 3.5-16 and 3.5-17). Proposed initial and maintenance treatment activities include manual and mechanical treatments. Ground-disturbing activities, such as the use of heavy machinery, could inadvertently damage or destroy tribal cultural resources if they are present in treatment areas. However, the letters sent to tribes pursuant to SPR CUL-2 requested information on the presence of TCRs in the treatment area and provided an opportunity for the tribes to advise on measures to protect any TCRs that are present. No responses were received, and it is assumed no TCRs are present. Potential impacts to archeological resources would be minimized and avoided as explained above in Impact CUL-2. SPRs applicable to this impact are CUL-1, CUL-2, and CUL-3, all of which are complete.

The potential for adverse effects on tribal cultural resources during implementation of the proposed project is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and intensity of ground disturbance are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT CUL-4

Initial and maintenance vegetation treatment activities would include mechanical treatments using heavy equipment; these treatments may use tractors, skidders, masticators, and/or chippers, which could uncover human remains if present in a treatment area. The potential for treatment activities to uncover human remains was examined in the PEIR (CalVTP Final PEIR Volume II p. 3.5-17). The NWIC records search did not reveal any known burials or sites containing human remains, but an inadvertent discovery could occur. This impact is within the scope of the PEIR, because the intensity of ground disturbance under the proposed project is consistent with what was analyzed in the PEIR. Additionally, consistent with the PEIR, the proposed project would comply with California Health and Safety Code Sections 7050.5 and Public Resources Code Section 5097 in the event of a discovery. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCE IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they 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 RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. Any cultural resources discovered during implementation of SPR CUL-4 would be avoided or treated as prescribed in SPR CUL-5. Implementation of SPR CUL-7 would avoid impacts to any built historical resources. Tribal Cultural Resources identified during SPR CUL-2 would be treated in accordance with SPR CUL-6. As a result, no changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to archaeological, historical, or tribal cultural resources would occur that is not covered in the PEIR.

4.5 BIOLOGICAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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-6 BIO-7 BIO-9 GEO-1 GEO-3 GEO-4 GEO-5 GEO-7 HAZ-5 HAZ-6 HYD-4 HYD-5	BIO-1a BIO-1b	LTSM	No	Yes
Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications	LTSM (all wildlife species except bumble bees) S&U (bumble bees)	Impact BIO-2, pp 3.6-138–3.6-184	Yes	BIO-1 BIO-2 BIO-10 GEO-1 GEO-3 GEO-4 GEO-5 GEO-7 HAZ-5 HAZ-6 HYD-1 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-5 BIO-6 BIO-8 BIO-9 HAZ-5 HAZ-6 HYD-4 HYD-5	None	LTS	No	Yes
Impact BIO-4: Substantially Affect State or Federally Protected Wetlands	LTSM	Impact BIO-4, pp 3.6-191–3.6-192	Yes	BIO-1 BIO-2 GEO-1, GEO-3	None	LTS	No	Yes

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
				GEO-4 GEO-5 GEO-7 HYD-1 HYD-4 HAZ-5 HAZ-6				
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 HYD-1	None	LTS	No	Yes
Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife	LTSM	Impact BIO-6, pp 3.6-197–3.6-198	Yes	BIO-1 BIO-12	None	LTS	No	Yes
Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources	NI	Impact BIO-7, pp 3.6-198–3.6-199	Yes	AD-3	NA	NI	No	Yes
Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan	NI	Impact BIO-8, pp 3.6-199–3.6-200	No	--	--	--	--	--

[1] LTS = less than significant; LTSM = less than significant with mitigation; NI = no impact; SU = significant and unavoidable.
[2]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 treatment project.

New Biological Resources Impacts: Would the treatment result in other impacts to biological resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.5.1 Discussion

Pursuant to SPR BIO-1, an Ascent biologist conducted a data review of project-specific biological resources, including habitat and vegetation types, and special-status plants, special-status wildlife, and sensitive habitats (i.e., sensitive natural communities and wetlands) with potential to occur in the treatment area. Habitat and vegetation types in the treatment area were initially identified using Fire and Resource Assessment Program FVEG vegetation mapping and aerial imagery of the treatment area from prior to the 2020 CZU Lightning Complex. Although, pre-burn conditions were considered to

assess the potential for resources to occur during initial and maintenance treatments, the baseline for the CEQA analysis in this PSA is the post-2020 CZU Lightning Complex burned condition. Further refinement of the FVEG vegetation mapping occurred during a reconnaissance survey conducted pursuant to SPR BIO-1, and additional refinement to address sensitive natural communities will occur per SPR BIO-3 as discussed in Impact BIO-3 below.

A list of special-status plant and wildlife species with potential to occur within the treatment area was compiled by completing a review of the California Natural Diversity Database (CNDDB) and California Native Plant Society Inventory of Rare and Endangered Plants of California database records for the nine U.S. Geological Survey (USGS) quadrangles containing and surrounding the treatment area (CNDDB 2021; CNPS 2021a), review of Exhibit C of the Santa Cruz County Forest Health and Fire Resilience PWP (RCD 2021), and Appendix BIO-3 (Table 1a, Table 1b, and Table 19) in the CalVTP PEIR (Volume II) for special-status plants and wildlife that could occur in the Central California Coast ecoregion. A list of sensitive natural communities with potential to occur within the treatment area was compiled by completing a CNDDB search of the nine USGS quads surrounding the treatment area (CNDDB 2021), reviewing Exhibit A of the PWP, and reviewing Table 3.6-3 (pages 3.6-25 – 3.6-27) in the CalVTP PEIR (Volume II) for Manual of California Vegetation defined sensitive natural communities that could occur in the vegetation types mapped in the treatment area in the Central California Coast ecoregion.

Ascent conducted a reconnaissance survey pursuant to SPR BIO-1 on October 15, 2021 to identify and document sensitive resources (e.g., aquatic habitat, riparian habitat, sensitive natural communities) and to assess the suitability of habitat in the treatment area for special-status plant and wildlife species. Vegetation communities were identified to the alliance level where possible, and incidental wildlife observations were recorded. Tree species observed within large portions of the treatment area include Douglas fir, tanoak, knobcone pine (*Pinus attenuata*), and redwood. Smaller numbers of golden chinquapin (*Chrysolepis chrysophylla*), madrone and live oak (*Quercus spp*) were also observed. The portion of the treatment area that was occupied by standing dead knobcone pine at the time of the survey also contained crown sprouting manzanita (*Arctostaphylos* spp.). The crown sprouting manzanita indicates there may be a transitional shrub-dominated community present for several years before knobcone seedlings grow large enough to surpass the shrub layer of manzanita and become dominant. The portion of the treatment area mapped as coastal scrub prior to the 2020 CZU Lightning Complex contained little native woody vegetation beyond a few Ceanothus shrubs of undetermined species along the access road.

Based on implementation of SPR BIO-1, including review of occurrence data, species ranges, habitat requirements for each species, and habitat present within the treatment area as assessed during the reconnaissance survey, a complete list of all species with potential to occur in the vicinity of the proposed project was assembled (Appendix B). Thirty-eight of the special-status plants and 10 of the special-status wildlife from the complete list of species were determined to have potential to occur in the treatment area (Table 4.5-1). These species are discussed in detail under Impact BIO-1 (special-status plants) and Impact BIO-2 (special-status wildlife).

Table 4.5-1 Special-Status Plant and Wildlife Species That Could Occur in the Treatment Area

Species	Listing Status[1]			Habitat	Potential for Occurrence
	Federal	State	Other		
Special-Status Plants					
Awned bent grass *Agrostis aristiglumis* (*A. microphylla*)	-	-	LCP	Valley grassland, wetland-riparian, common in many plant communities, usually in wetlands (Calflora 2021). Elevation 0 – 1,680 feet. Blooms May – July. Annual grass.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable habitat is present in the treatment area.
Anderson's manzanita *Arctostaphylos andersonii*	–	–	CRPR 1B.2	Broad-leafed upland forest, chaparral, north coast coniferous forest. Open sites, redwood forest. 200–2,500 feet in elevation. Blooms November–May. Perennial evergreen shrub.	Could Occur: The treatment area contains forested and chaparral habitat that may be suitable for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence
	Federal	State	Other		
Schreiber's manzanita *Arctostaphylos glutinosa*	–	–	LCP CRPR 1B.2	Closed-cone coniferous forest, chaparral. Mudstone or diatomaceous shale outcrops; often with *Pinus attenuata*. 560–2,250 feet in elevation. Blooms as early as November in some locations, generally March–April. Perennial evergreen shrub.	Could Occur: The treatment area contains forested habitat, chaparral habitat, and soils that may be suitable for this species.
Kings Mountain manzanita *Arctostaphylos regismontana*	-	-	CRPR 1B.2	Broad-leafed upland forest, chaparral, north coast coniferous forest. Granitic or sandstone outcrops. 790–2.310 feet in elevation. Blooms December–April. Perennial evergreen shrub.	Could Occur: The treatment area contains forest and chaparral habitat suitable for this species, and the project is on the southern end of the geographic range of the species.
Santa Cruz Mountains pussypaws *Calyptridium parryi* var. *hesseae*	-	-	LCP CRPR 1B.1	Chaparral, cismontane woodland. Sandy or gravelly openings. 980–5,040 feet in elevation. Blooms May–August. Annual herb.	Could Occur: The treatment area contains chaparral habitat suitable for this species.
Monterey paintbrush *Castilleja latifola*	-	-	LCP	Coastal strand, northern coastal scrub. 0 – 1,800 feet. Blooms February – September. Perennial herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable habitat for this species is present within the treatment area.
San Francisco collinsia *Collinsia multicolor*	–	–	LCP CRPR 1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 98–820 feet in elevation. Blooms as early as February; however generally blooms March–May. Annual herb.	Could Occur: The treatment area contains habitats and shale derived soils that may be suitable for this species.
Western leatherwood *Dirca occidentalis*	–	–	CRPR 1B.2	Broad-leafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 80–1,390 feet in elevation. Blooms January–March, and as late as April in some conditions. Perennial deciduous shrub.	Could Occur: The treatment area contains chaparral and closed-cone coniferous forest habitat suitable for this species.
California bottle brush grass *Elymus californicus*	-	-	LCP CRPR 4.3	North Coast coniferous forest, cismontane woodland, broad-leafed upland forest, riparian woodland. In sandy humus soils. 50–1,540 feet in elevation. Blooms May–August and as late as November in some conditions. Perennial grass.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area contains coniferous forest habitat suitable for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence
	Federal	State	Other		
Sand-loving wallflower *Erysimum ammophilum*	-	-	LCP CRPR 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 0–200 feet in elevation. Blooms February–June. Perennial herb.	Could Occur: The treatment area contains chaparral habitat suitable for this species.
San Francisco wallflower *Erysimum franciscanum*	-	-	LCP CRPR 4.2	Chaparral, coastal dunes, coastal scrub, and valley and foothill grassland. Often on serpentinite or granitic, sometimes found on roadsides. Perennial herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area contains chaparral habitat suitable for this species.
Fragrant fritillary *Fritillaria liliacea*	-	-	CRPR 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 10–1,310 feet in elevation. Blooms February–April. Perennial herb (bulb).	Could Occur: The treatment area contains chaparral habitat suitable for this species.
Coastal gumplant *Grindelia latifolia latifolia* (G. stricta var. playphylls	-	-	LCP	Coastal Strand, Coastal Salt Marsh, Coastal Sage Scrub, wetland-riparian near coast. 0- 1,050 feet. Blooms May – October. Perennial herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable wetland habitat may be present within the treatment area.
Kellogg's (wedge leaved) horkelia *Horkelia cuneata* var. *sericea*	–	–	LCP CRPR 1B.1	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. 15–705 feet in elevation. Blooms April–September. Perennial herb.	Could Occur: The treatment area contains closed-cone coniferous forest and chaparral habitat and soils suitable for this species.
Redwood lily *Lilium rubescens*	-	-	LCP CRPR 4.2	Ultramafic. Chaparral, lower montane coniferous forest, broad-leafed upland forest, upper montane coniferous forest, north coast coniferous forest. Sometimes on serpentine. 100–6,270 feet in elevation. Blooms April–August and as late as September in some conditions. Perennial herb (bulb).	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable chaparral habitat is present within the treatment area.
Arcuate bush-mallow *Malacothamnus arcuatus*	-	-	CRPR 1B.2	Chaparral, cismontane woodland. Gravelly alluvium. 3–2,410 feet in elevation. Blooms April–September. Perennial shrub.	Could Occur: The treatment area contains chaparral habitat suitable for this species.
Marsh microseris *Microseris paludosa*	–	–	CRPR 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 15–980 feet in elevation. Blooms April–June, and as late as July in some conditions. Perennial herb.	Could Occur: The treatment area contains closed-cone coniferous forest habitat suitable for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence
	Federal	State	Other		
Santa Cruz County monkeyflower *Mimulus rattanii* spp. *decutatus*	-	-	LCP CRPR 4.2	Chaparral, lower montane coniferous forest. Gravelly sites at margins of vegetation. 1,310–1,640 feet in elevation. Blooms May–July. Annual herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable chaparral habitat is found within the treatment area.
Northern curly-leaved monardella *Monardella sinuata* ssp. *nigrescens*	-	-	CRPR 1B.2	Coastal dunes, coastal scrub, chaparral, lower montane coniferous forest. Sandy soils. 0–980 feet in elevation. Blooms May–July sometimes as early as April and as late as September. Annual herb.	Could Occur: The treatment area contains chaparral habitat and sandy soils suitable for this species.
Woodland woollythreads *Monolopia gracilens*	–	–	CRPR 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broad-leafed upland forest, north coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. 330–3,940 feet in elevation. Blooms March–July and as early as February under some conditions. Annual herb.	Could Occur: The treatment area contains coniferous forest, chaparral, and rocky soils suitable for this species.
Kellman's bristle moss *Orthotrichum kellmanii*	-	-	CRPR 1B.2	Chaparral, cismontane woodland. Sandstone outcrops with high calcium concentrations from eroded boulders out of non-calcareous sandstone bedrock. Rock outcrops in small openings within dense chaparral with overstory of scattered *Pinus attenuata*. 1,125–2,250 feet in elevation. Blooms January–February. Moss.	Could Occur: The treatment area contains chaparral on sandstone derived soils and an overstory of *Pinus attenuata* suitable for this species.
Dudley's lousewort *Pedicularis dudleyi*	–	SR	LCP CRPR 1B.2	Chaparral, north coast coniferous forest, valley and foothill grassland. Deep shady woods of older coast redwood forests; also in maritime chaparral. 200–2,950 feet in elevation. Blooms April–June. Perennial herb.	Could Occur: The treatment area contains chaparral and coniferous forest habitat suitable for this species.
Santa Cruz Mountains beardtongue *Penstemon rattanii var. kleei*	-	-	LCP CRPR 1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest. Sandy shale slopes; sometimes in the transition between forest and chaparral. 1,310–3,610 feet in elevation. Blooms May–June. Perennial herb.	Could Occur: The treatment area contains coniferous forest habitat; and contains the sandy soils suitable for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence
	Federal	State	Other		
Gairdner's yampah *Perideridia gairdneri* ssp. *gairdneri*	–	-	LCP CRPR 4.2	Broad-leafed upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools, vernally mesic sites. 0 to 2,000 feet in elevation. Blooms Jun -Oct. Perennial herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains suitable chaparral habitat for this species.
White-flowered rein orchid *Piperia candida*	–	–	CRPR 1B.2	North coast coniferous forest, lower montane coniferous forest, broad-leafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 150–5,300 feet in elevation. Blooms As early as March in some conditions; however, generally blooms May–September. Perennial herb.	Could Occur: The treatment area contains forest habitat suitable for this species.
Michael's rein orchid *Piperia elongata* spp *michaelii**	-	-	LCP CRPR 4.2	Coastal bluff scrub, coastal scrub, cismontane woodland, chaparral, closed-cone coniferous forest, lower montane coniferous forest. Mudstone and humus, generally dry sites. 10–3002 feet in elevation. Blooms April–August. Perennial herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains suitable habitat.
Choris' popcornflower *Plagiobothrys chorisianus* var. *chorisianus*	-	-	LCP CRPR 1B.2	Chaparral, coastal scrub, coastal prairie. Mesic sites. 50–525 feet in elevation. Blooms March–June. Annual herb.	Could Occur: The treatment area contains chaparral, habitat suitable for this species.
Straggly gooseberry *Ribes divaricatum* var. *publiflorum*	-	-	LCP	Wetland and riparian. 0 -4,700 feet. Blooms March – May. Perennial shrub.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area may contain suitable wetland or riparian habitat.
Pine rose *Rosa pinetorum*	–	–	CRPR 1B.2	Closed-cone coniferous forest, cismontane woodland. 15–3,580 feet in elevation. Blooms May–July. Perennial shrub	Could Occur: The treatment area contains closed-cone coniferous forest habitat suitable for this species.
Hoffmann's sanicle *Sanicula hoffmannii*	-	-	LCP CRPR 4.3	Broad-leafed upland forest, coastal scrub, coastal bluff scrub, chaparral, cismontane woodland, lower montane coniferous forest. Cool slopes in deep soil, often in moist shaded serpentine soils, or in clay soils. 100–1,000 feet in elevation. Blooms March–May. Perennial herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains suitable habitat for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence
	Federal	State	Other		
San Francisco campion Silene verecunda ssp. verecunda	-	-	LCP CRPR 1B.2	Coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, coastal prairie. Often on mudstone or shale; one site on serpentine. 100–2,120 feet in elevation. Blooms March–June, and as early as February and as late as August in some locations. Perennial herb.	Could Occur: The treatment area contains chaparral habitat suitable for this species.
Santa Cruz microseris *Stebbinsoseris decipiens*	-	-	LCP CRPR 1B.2	Broad-leafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal prairie, coastal scrub, and valley and foothill grassland. 35- 1,640 feet in elevation. Blooms April – May. Annual herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area contains closed-cone coniferous forest and chaparral habitat suitable for this species.
Mt. Diablo cottonweed *Stylocline amphibioa (Micropus amphiboles)*	-	-	LCP CRPR 3.2	Valley and foothill grassland, cismontane woodland, chaparral, broad-leafed upland forest. Bare, grassy or rocky slopes. 150–2,700 feet in elevation. Blooms March–May. Annual herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains suitable habitat for this species.
Santa Cruz clover *Trifolium buckwestiorum*	–	–	CRPR 1B.1	Coastal prairie, broad-leafed upland forest, cismontane woodland. Moist grassland, gravelly margins, habitat edges. 340–2,000 feet in elevation. Blooms April–October. Annual herb	Could Occur: The treatment area contains stands of broad-leafed upland forest habitat that may be suitable for this species.
West's clover *Trifolium grayi*	-	-	LCP	Wetland habitat within redwood forest and mixed evergreen forest. 0 to 2,295 feet. Blooms April-June. Annual herb.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area may contain wetland habitat suitable for this species.
Special-Status Wildlife					
California giant salamander *Dicamptodon ensatus*	–	SSC	-	Meadow and seep, north coast coniferous forest, and riparian forest. Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	Could Occur: The species has been documented to occur within the project region (CNDDB 2021); and treatment area contains habitat suitable for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence
	Federal	State	Other		
California red-legged frog *Rana draytonii*	FT	SSC	LCP	Artificial flowing waters, artificial standing waters, freshwater marsh, marsh & swamp, riparian forest, riparian scrub, riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters. Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Could Occur: The species has been documented to occur within Waddell creek, which is located approximately 0.25 miles from the treatment area (CNDDB 2021), and the treatment area contains upland/dispersal habitat suitable for this species.
Santa Cruz black salamander *Aneides niger*	–	SSC	-	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara counties. Adults found under rocks, talus, and damp woody debris.	Could Occur: The species has been documented to occur within the project region (CNDDB 2021); and the treatment area contains habitat suitable for this species.
Foothill yellow-legged frog *Rana boylii*	-	SE	-	Aquatic, chaparral, cismontane woodland, coastal scrub, Klamath/north coast flowing waters, lower montane coniferous forest, meadow and seep, riparian forest, riparian woodland, and Sacramento/San Joaquin flowing waters. Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis. Endangered: Southern Sierra, Central Coast, South Coast. Threatened: Feather River, Northern Sierra. North Coast: Not Listed.	Could occur: The species has been documented at one location within the last 20 years within the region (CNDDB 2021); however, more widespread occurrence historically. Whitehouse Creek adjacent to the treatment area is suitable habitat for this species.
Cooper's hawk *Accipiter cooperii*	-	-	LCP	Cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest. Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	Could occur: The species has not been documented to occur within the project region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. As the treatment area recovers from the 2020 CZU Complex it is likely to contain the patchy open habitat required for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence
	Federal	State	Other		
American badger *Taxidea taxus*	-	SSC	LCP	Alkali marsh, alkali playa, alpine, alpine dwarf scrub, bog a fen, brackish marsh, broad-leafed upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Could occur: The portions of the treatment area contain suitable habitat for the species. The species has been documented to occur within the project region near Pigeon Point (CNDDB 2021).
Ringtail *Bassariscus astutus*	–	FP	-	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations.	Could Occur: The treatment area contains suitable habitat for this species. There are no documented occurrences in the project region, although the species in not tracked in the CNDDB.
Mountain lion-Southern California/Central Coast evolutionary significant unit *Puma concolor*	–	SC	-	Found in most habitats within Central California. Uses caves, other natural cavities, and brush thickets for cover and denning, often within riparian habitats.	Could Occur: The treatment area contains suitable foraging habitat for mountain lion. Although nursery habitat is unlikely to occur within or adjacent to the treatment area (Yovovich pers. comm. 2021).
Pallid bat *Antrozous pallidus*	–	SSC	-	Chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland. Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Could Occur: The treatment area contains suitable roosting and foraging habitat for the species. The species has been documented to occur only historically within the project region (CNDDB 2021); however, bat species may be under reported.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	–	SSC	-	Chaparral, redwood. Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves and other material. May be limited by availability of nest-building materials.	Could Occur: The treatment area contains suitable forested habitat, with moderate to dense understory in some locations. Documented to occur within the project region (CNDDB 2021).

1. Legal Status Definitions:

California Rare Plant Ranks (CRPR):

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
3 Plant species for which more information is needed (not protected under CEQA)
4 Plants of limited distribution, a watch list

CRPR Threat Ranks:

0.1 Seriously threatened in California (over 80% of occurrences threatened, high degree and immediacy of threat)
0.2 Moderately threatened in California (20-80% occurrences threatened, moderate degree and immediacy of threat)
0.3 Not very threatened in California (less than 20% of occurrences threatened; low degree of immediacy or threat or no current threats known)

State: SE State Listed as Endangered (legally protected)
SR State Listed as Rare (legally protected by NPPA)
FP Fully Protected (legally protected)
SSC Species of Special Concern (no formal protection other than CEQA consideration)
SC State Candidate for Listing

Federal: FT Federally Listed as Threatened (legally protected)

Other:
CRPR (see above)
LCP Species listed in the Santa Cruz County Local Coastal Program Forest Health and Fire Resilience Public Works Plan

CESA = California Endangered Species Act; CEQA = California Environmental Quality Act; CRPR = California Rare Plant Rank; ESA = Endangered Species Act; NPPA = Native Plant Protection Act

Sources: Calflora 2021; CNDDB 2021; CNPS 2021a; RCD 2021; Yovovich pers. comm. 2021

IMPACT BIO-1

During the SPR BIO-1 reconnaissance-level survey of the treatment area conducted on October 15, 2021, it was observed that the majority of the area had been burned in the 2020 CZU Lightning Complex. However, the intensity of the burn was highly variable. The fire resulted in an approximately 100 percent reduction in overstory and understory cover within knobcone pine, and coastal scrub habitats, although root crowns were observed resprouting. The fire was less intense in other parts of the treatment area, burning variable portions of the canopy cover, or remaining in the understory as was the case for the redwood stands within Camp Skylark and in Old Woman's Creek drainage. However, as evidenced by the presence of vegetation observed reestablishing from seed within the treatment area, at least some of the seed bank survived the fire and remains present in the soil. Therefore, any of the special-status plants that may have occurred within the treatment area before the fire may resprout or grow from the established seed bank.

The proposed mechanical treatments, manual treatments, herbicide application, and biomass disposal could result in direct or indirect adverse effects on the special-status plant species with suitable habitat in the treatment area. The potential for treatment activities to result in adverse effects on special-status plants was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-131 to 3.6-138). The broadcast of chips and mulch over the treatment area at less than 4 inches maximum depth would not have an adverse effect on special-status plant species.

Of the special-status species that could occur within the treatment area, awned bent grass, coastal gumplant, Choris' popcornflower, Gairdner's yampah, straggly gooseberry, swamp harebell, Santa Cruz clover, Pacific Grove clover, and West's clover are likely to be limited to wetter portions of the treatment area adjacent to ephemeral drainages. Pursuant to SPR HYD-4, Watercourse and Lake Protection Zones (WLPZs) adjacent to all aquatic habitat within the treatment area would be implemented, which would avoid some of the wetland or stream-associated habitat that could support these species.

SPR BIO-7 would be implemented and requires protocol-level surveys for special-status plants to be conducted prior to mechanical treatments due to the potential for ground disturbance to alter habitat, making it unsuitable for special-status plants to reestablish following treatment, or to destroy seeds; stumps; or roots, rhizomes, bulbs, and other underground parts of special-status plants. Where protocol-level surveys identify the presence of special-status plants, Mitigation Measure BIO-1a would be implemented for plants listed as rare under the Native Plant Protection Act (NPPA) (i.e., Dudley's lousewort); no plants listed under ESA or listed as threatened or endangered under CESA have the potential to occur in the treatment area. For all other special-status plants, Mitigation Measure BIO-1b would be implemented. Per Mitigation Measures BIO-1a and BIO-1b, if special-status plants are 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 mechanical treatment would not occur unless a qualified RPF or botanist determines that the species would benefit from treatment in the occupied habitat area. The size and shape of the buffer zone may be

adjusted if a qualified RPF or botanist determines that a smaller buffer would be sufficient to avoid killing or damaging special-status plants, or that a larger buffer is necessary to sufficiently protect plants from the treatment activity.

Manual treatments using chainsaws and hand-tools as well as targeted herbicide application would not result in ground disturbance, but individual plants could be crushed by crews on foot if present in the treatment area. The accidental crushing of individual herbaceous annual species or geophytes could be avoided by conducting manual and herbicide treatment activities during the dormant season (i.e., when the plant has no aboveground parts). If manual and herbicide treatments cannot be completed in the dormant season and would be implemented during the growing period of annual and geophyte species, protocol surveys (per SPR BIO-7) and avoidance of any identified special-status plants (per Mitigation Measures BIO-1a and BIO-1b) would be implemented, as described above. The remaining special-status plant species that have potential to occur within the treatment area are perennial species, which could not be avoided in the same manner as herbaceous annual species or geophytes because they would be present above ground year-around; therefore, protocol-level surveys under SPR BIO-7 to identify them would be necessary prior to implementing manual and herbicide treatment activities at any time of year, and Mitigation Measures BIO-1a and BIO-1b would be implemented for any identified special-status plants.

In addition, herbicide application has the potential to inadvertently damage non-target special-status plants. To avoid inadvertent herbicide application and damage to special-status plant species in the treatment area, SPR HYD-5 would be implemented, which requires that no herbicides be applied within a 50-foot buffer of plants listed as rare under NPPA, herbicide mixing sites be located away from non-target vegetation, use of dye in herbicides to avoid inadvertent application to non-target vegetation by overspray, and measures to minimize herbicide drift and runoff to non-target areas. SPRs applicable to this impact are BIO-1, BIO-2, BIO-6, BIO-7, BIO-9, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HAZ-5, HAZ-6, HYD-4, and HYD-5. Mitigation Measures BIO-1a and BIO-1b are also applicable to this impact.

This impact on special-status plants is within the scope of the PEIR because the affected special-status plant species were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-2

The proposed project could result in direct or indirect adverse effects on special-status wildlife species and habitat suitable for these species within the treatment area, as described in the following sections.

Special-Status Salamanders

Two special-status salamanders have potential to occur within the treatment area: California giant salamander and Santa Cruz black salamander (Table 4.5-1). While there are no perennial streams within the treatment area, the treatment area contains several Class III ephemeral streams, a potential Class II intermittent stream, and is within 300 feet of Whitehouse Creek (a perennial stream). Therefore, the treatment area is upland habitat for these species where understory vegetation and logs are present for cover.

The proposed mechanical treatments, manual treatments, herbicide application, and biomass disposal could result in direct or indirect adverse effects on special-status salamanders though the temporary alteration of habitat. The potential for treatment activities to result in adverse effects on special-status salamanders was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184).

Per SPR BIO-1, if it is determined that adverse effects on special-status salamanders can be clearly avoided by physically avoiding the suitable habitat, then no mitigation would be required. However, because California giant salamander and Santa Cruz black salamander may be present year-around at relatively large distances from aquatic habitat where cover is present within the treatment area, it is unlikely that all potentially suitable habitat for these species can be avoided by initial and maintenance treatments. WLPZs adjacent to all aquatic habitat within the treatment area would be implemented per SPR HYD-4 and would reduce adverse effects; however, these measures would not result in full avoidance of adverse effects on special-status salamanders because they may occur beyond

the WLPZ and some treatments are allowed to occur within the WLPZ that may have adverse effects. As a result, SPR BIO-10 would apply, and focused surveys for special-status salamanders would be conducted within suitable habitat prior to implementation of treatments. If special-status salamanders are not detected within the treatment area during focused surveys, then no mitigation for the species would be required. If special-status salamanders are detected during focused surveys, then Mitigation Measure BIO-2b would be implemented. Under Mitigation Measure BIO-2b, the RCD would require biological monitoring for treatment activities within or adjacent to sensitive habitat areas (e.g., intermittent streams, ephemeral streams), flagging areas for avoidance, relocation of individual animals by a qualified RPF or biologist with a valid CDFW scientific collecting permit, and/or other measures recommended by a qualified biologist, RPF, or CDFW to avoid injury or mortality of these species. In addition, to avoid and minimize impacts from herbicides on special-status salamanders, SPR HAZ-5, HAZ-6, and HYD-5 would be implemented. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events. SPRs applicable to this impact are BIO-1, BIO-2, BIO-10, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HAZ-5, HAZ-6, HYD-1, HYD-4, and HYD-5. Mitigation Measure BIO-2b is also applicable to this impact.

This impact on special-status salamanders is within the scope of the PEIR because the affected special-status salamander species were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Foothill Yellow-legged Frog

Foothill yellow-legged frog is typically found in perennial streams and adjacent moist upland habitat, depending on the time of year. During the fall and winter, the species may be found in and near small perennial streams. In the spring, individuals move to wider sunlit channels to breed. The species is highly aquatic and is rarely found farther than 36 to 150 feet from perennial water (CDFW 2018). However, a longer dispersal distance has been noted (over 4.3 miles), although primarily wetted channels were used in this example (CDFW 2018). Although foothill yellow-legged frog has only been documented at one location regionally within the last 20 years (CNDDB 2021), the species was more widespread historically in the coast range. Whitehouse Creek is a perennial creek; the creek itself and area within 200 feet encompass potentially suitable habitat for this species.

The potential for treatment activities including maintenance treatments to result in adverse effects on foothill yellow-legged frog was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184). Per SPR BIO-1, if it is determined that adverse effects on foothill yellow-legged frog can be clearly avoided by physically avoiding the suitable habitat, or by conducting treatments outside of the season when foothill yellow-legged frogs are present, then no further action is required. Although, Whitehouse Creek is suitable foothill yellow-legged frog aquatic habitat, no treatments are proposed within 200 feet of the creek, which would avoid both aquatic and upland habitat for the species. In addition, SPR HYD-4 would require implementation of WLPZs adjacent to any potential wetted channel habitat (e.g., Class III ephemeral streams) within the treatment area. Furthermore, treatments would occur outside of the wet season, which begins with the first frontal rain system depositing a minimum of 0.25 inch of rain after October 15 and ends on April 15. Additionally, mechanized treatments would be avoided 24 hours after a rain event defined as any precipitation resulting in 0.2 inch or greater throughout the year (SPR GEO-1). Therefore, initial and maintenance treatments that would involve mechanical treatment, manual treatment, herbicide application, and chipping and masticating of biomass, would not adversely affect foothill yellow-legged frog. SPRs applicable to this impact are BIO-1 and HYD-4.

This impact on foothill yellow-legged frog is within the scope of the PEIR because effects on foothill yellow-legged frog was covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project

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

California Red-legged Frog

California red-legged frog has been documented to occur within 1 mile of the treatment area within Whitehouse Creek (CNDDB 2021). Studies have demonstrated that California red-legged frogs remain very close to breeding habitat during the breeding season and typically do not move more than approximately 300 feet into upland habitats (Bulger et al. 2003; Fellers and Kleeman 2007). However, adult and juvenile California red-legged frogs are known to travel through upland habitat (e.g., riparian, woodland, grassland) to move between breeding and nonbreeding sites (e.g., other ponds, deep pools in streams, moist and cool riparian understory, burrows) for access to refugia and foraging habitat, or to disperse to new breeding locations. During migration, California red-legged frogs may travel long distances from aquatic habitat and typically travel in straight lines irrespective of vegetation types and have been documented to move over 1.7 miles between aquatic habitat sites (Bulger et al. 2003). Although the quality of the habitat likely declined due to the 2020 CZU Lighting Complex, the treatment area is suitable for dispersal and the potion of the treatment area within 300 feet of Whitehouse Creek is suitable upland habitat. Therefore, California red-legged frog has potential to occur within the treatment area.

Initial and maintenance treatments would involve mechanical treatment, manual treatment, herbicide application, and chipping and masticating of biomass, which could negatively affect California red-legged frogs if present in the treatment area. The potential for treatment activities including maintenance treatments and biomass disposal to result in adverse effects on California red-legged frog was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184). California red-legged frogs are assumed present in the portion of Whitehouse Creek adjacent to the treatment area, may move through the treatment area during the wet season, and may be present year-around within 300 feet of Whitehouse Creek.

Per SPR BIO-1, if it is determined that adverse effects on California red-legged frog can be clearly avoided by physically avoiding the suitable habitat, or by conducting treatments outside of the season when California red-legged frogs are present, then no further action would be required. Under SPR GEO-1, the RCD would be required to conduct treatments outside the wet season, which would avoid the sensitive period of the species life (i.e., the period when frogs could be moving through the treatment area). The wet season begins with the first frontal rain system depositing a minimum of 0.25 inch of rain after October 15 and ends on April 15. Additionally, mechanized treatments would be avoided 24 hours after a rain event defined as any precipitation resulting in 0.2 inch or greater throughout the year. Implementation of SPR GEO-1 would avoid work when California red-legged frog may be moving within the treatment area during the wet season; however, the species may be present within upland habitat in the treatment area year-around. Therefore, all adverse effects cannot be clearly avoided and SPR BIO-10 would apply. Pursuant to SPR BIO-10, the RCD would assume presence of California red-legged frog within the treatment area, and Mitigation Measure BIO-2a would be required. Under Mitigation Measure BIO-2a, the RCD would require pre-treatment surveys and biological monitoring for treatment activities year-around within upland habitat; ecological restoration treatments and part of a shaded fuel break would occur within 200 to 300 feet of the creek, but no treatment would occur within 200 feet of the creek. In addition, mechanical treatments would be prohibited within 30 feet of Class III streams (Mitigation Measure BIO-2a).

In addition, herbicides would only be applied directly to stumps and stems, or as localized spot treatments using hand-held devices only. No herbicide application would occur within 60 feet of breeding or non-breeding aquatic habitat. The potential adverse effects of herbicides on California red-legged frog would also be avoided by implementing SPR HAZ-5, HAZ-6, and HYD-5. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides, including the California Red-Legged Frog Injunction (refer to Section 2.3.3, "Herbicide Application"). SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events.

The limitation of treatments to outside of the wet season and 24 hours after a rain event, pre-treatment surveys, restrictions on herbicide use, and other measures would avoid disturbance, injury, and mortality of California red-legged frogs within the treatment area.

Habitat function for California red-legged frogs would be maintained during and following initial and maintenance treatments. Treatments would be limited in WLPZs within the treatment area and would not occur within 200 feet of Whitehouse Creek. These areas are anticipated to be the most frequently used habitats of California red-legged frog within the treatment area. Within other habitat in the treatment area, existing native herbaceous vegetation would be retained in a mosaic pattern, downed wood greater than 12 inches in diameter (at a maximum density of approximately 10 tons per acre) and a portion of existing native shrubs would be retained, which would maintain cover for California red-legged frogs. Mitigation Measure BIO-2a would require that habitat features necessary for survival (e.g., downed wood, native herbaceous vegetation, and native shrubs for cover) would be retained. In addition, the following SPRs would be implemented to avoid indirect adverse effects to aquatic habitat: SPR GEO-3 (requires stabilization of disturbed soil), SPR GEO-4 (requires erosion monitoring), SPR GEO-5 (requires use of water breaks to drain stormwater), SPR GEO-7 (limits heavy equipment on steep slopes), and HYD-1 (requires compliance with water quality regulations).

Pursuant to Mitigation Measure BIO-2a, and because this species is listed under ESA, the RCD must consult with USFWS about its determination that mortality, injury, or disturbance would not occur, and habitat function would be maintained. For the reasons summarized above, the RCD determined that implementation of treatments would maintain habitat function for California red-legged frog and consulted with USFWS to seek technical input on this determination, as required. On December 22, 2021, the RCD sent a memo to Chad Mitcham at USFWS describing the measures that would be taken to avoid mortality, injury, and disturbance to California red-legged frogs and maintain habitat function in compliance with Mitigation Measure BIO-2a (see Appendix D). In addition, Chad Mitcham and the RCD met at the Skylark Ranch treatment area on January 4, 2022, to discuss and refine the proposed measures. Refinements to the project description that resulted from this consultation included a retention standard for herbaceous vegetation, refinements to the use of chipped and masticated material, and refinements to the retention of snags and down logs (Section 2.3.1, "Mechanical Vegetation Treatment – Phase I and II" and Section 2.4, "Biomass disposal"). Following the site visit to the Last Chance Road treatment area on January 4, 2022, these refinements were confirmed as appropriate in an email from Chad Mitcham dated January 18, 2022. SPRs applicable to this impact are BIO-1, BIO-2, BIO-10, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HAZ-5, HAZ-6, HYD-4, and HYD-5. Mitigation Measure BIO-2a is also applicable to this impact.

This impact on California red-legged frog is within the scope of the PEIR because effects on California red-legged frog was covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-Status Birds

Cooper's hawk is the only special-status bird species that may nest within the treatment area (Table 4.5-1). Although the entire treatment area is not suitable habitat due to tree mortality from the 2020 CZU Lightning Complex, Cooper's hawk may nest in lightly burned habitat with intact canopies and forage within the treatment area. Initial treatment activities are planned to begin in May 2022, which overlaps with a portion of the nesting season (February 1–August 31); although not scheduled at this time, maintenance treatments may also occur during the nesting season. Therefore, direct removal of potential nests and indirect adverse effects from noise and human/mechanical disturbance on nesting Cooper's hawk may occur during mechanical and manual treatments. In addition, herbicide treatments could also result in indirect adverse effects from human disturbance because of the sensitivity of Cooper's hawk to people near a nest. The potential for treatment activities, including maintenance treatments, to result in adverse effects on special-status birds was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184).

Per SPR BIO-1, if it is determined that adverse effects on special-status species can be clearly avoided by physically avoiding the suitable habitat or by conducting treatments outside of the season when a sensitive resource is present,

then no additional action would be required. However, because Cooper's hawk could be nesting in multiple locations within the treatment area during the time when treatments are conducted, there is no feasible way to avoid all potentially suitable habitat for the species during implementation of treatments. Therefore, SPR BIO-10 would apply, and focused surveys for Cooper's hawk nests within the treatment area would be conducted by a qualified biologist within 14 days prior to implementation of all treatments that are conducted during the nesting season to determine whether Cooper's hawk are present. If no Cooper's hawk nests are observed during focused surveys, then additional mitigation for this species would not be required. If Cooper's hawk nests are observed during focused surveys, then Mitigation Measure BIO-2b would be implemented. Under Mitigation Measure BIO-2b, trees with visible nests will be retained, whether or not the nests occupied. In addition, a no-disturbance buffer of at least 500 feet would be established around active Cooper's hawk nests, and no treatment activities would occur within this buffer until the chicks have fledged as determined by a qualified biologist or RPF. Herbicide treatments have the potential for additional adverse effects beyond nest disturbance due to accidental exposure to herbicides or contamination of water sources. However, these effects would be avoided and minimized by implementation of SPR HAZ-5, HAZ-6, and HYD-5. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events.

The proposed treatments are not expected to result in long-term adverse effects on Cooper's hawk, because treatments would not alter the live tree canopy that provides nesting habitat, or substantially alter the habitat that is available for prey species in the project vicinity (e.g., songbirds). Native live trees greater than 12 inches dbh would not be removed, and existing downed wood greater than 12 inches in diameter (approximately 10 tons per acre), 1 to 2 snags greater than 12 inches dbh per acre, and a portion of native shrubs would be retained within the treatment area. SPRs applicable to this impact are BIO-1, BIO-2, BIO-10, HAZ-5, HAZ-6, and HYD-5. Mitigation Measure BIO-2b is also applicable to this impact.

This impact on Cooper's hawk is within the scope of the PEIR because effects on special-status birds were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Pallid Bat

The 2020 CZU Lightning Complex resulted in highly variable tree mortality throughout the treatment area; large live trees remain and standing snags are abundant. Large snags and remaining live trees may provide cavities for pallid bat roosting within the treatment area. Pallid bats give birth in maternity roosts and young bats may be present in these roosts from the beginning of April to the end of August.

Initial and maintenance treatments would be conducted within habitat suitable for pallid bats. In addition, initial treatments are proposed to begin in May 2022, which is during the pallid bat maternity season (April 1 to August 31); although unscheduled at this time, maintenance treatments may also occur during the maternity season. Therefore, mechanical and manual treatments could disturb active pallid bat roosts from auditory and visual stimuli (e.g., presence of heavy equipment, vehicles, personnel). This disturbance could potentially result in abandonment of the roost and loss of young. The potential for treatment activities, including maintenance treatments, to result in adverse effects on pallid bat was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184).

If treatments occur during the bat maternity season, then SPR BIO-10 would apply, and focused surveys for pallid bats would be conducted within suitable habitat areas prior to treatment activities. If pallid bat roosts are identified during focused surveys, Mitigation Measure BIO-2b for pallid bats would be implemented. Under Mitigation Measure BIO-2b, a no-disturbance buffer of 250 feet would be established around active pallid bat roosts, and mechanical and manual treatments using mechanical tools would not occur within this buffer. A no-disturbance buffer of 250 feet is necessary to protect sensitive roosts; this buffer size was adjusted to be larger than the general no-disturbance buffer of 100 feet provided in Mitigation Measure BIO-2b in order to provide adequate protection such that impacts would

be less than significant under CEQA. Herbicide treatments are not anticipated to have adverse disturbance effects because they would not result in direct removal of roosts and the noise and disturbance would be far less than those for mechanical treatments and manual treatments that use mechanize tools. Due to this absence of disturbance effects, survey and buffer requirements would not apply to herbicide treatments. However, herbicide treatments have the potential for additional adverse effects beyond roost disturbance, due to accidental exposure to herbicides or contamination of water sources, which would be avoided and minimized by implementation of SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events.

Habitat function for special-status bats would be maintained by initial and maintenance treatments because treatments would not result in removal of native live trees greater than 12 inches dbh, and 1 to 2 snags per acre greater than 12 inches dbh would be retained within the treatment area. SPRs applicable to this impact are BIO-1, BIO-2, BIO-10, HAZ-5, HAZ-6, and HYD-5. Mitigation Measure BIO-2b is also applicable to this impact.

This impact on pallid bat is within the scope of the PEIR because effects on pallid bat were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Mountain Lion

Mountain lions have been documented to occur throughout the Santa Cruz Mountains. However, due to the treatment area being within and in close proximity to a Girl Scout camp (i.e., Skylark Ranch) and other human development within the vicinity, the treatment area and adjacent habitat (within 2,000 feet) is not likely to be used as nursery habitat (Yovovich pers. comm. 2021). However, mountain lions may use the treatment area as foraging habitat year-around.

Initial and maintenance treatments would be conducted within suitable foraging habitat for mountain lions, and foraging mountain lions may use the treatment area during project implementation. However, work would not occur from dusk to dawn when mountain lions are most active. In addition, foraging mountain lions are also likely to avoid the area while treatments are actively being performed due to increased noise from equipment and human presence. Furthermore, SPR BIO-2 would be implemented and require biological resources training for workers and would instruct workers to stop work and allow wildlife, including mountain lion, to leave the area unharmed. The potential for treatment activities, including maintenance treatments, to result in adverse effects on burrowing or denning special-status wildlife, which includes mountain lion, was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184).

Herbicide application has the potential for adverse effects due to accidental exposure to herbicides or contamination of water sources, which would be avoided and minimized by implementation of SPR HAZ-5 HAZ-6, and HYD-5 SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events.

Habitat function for hunting mountain lions would be maintained by the project because treatment activities would retain native live trees greater than 12 inches dbh, logs greater than 12 inches in diameter (approximately 10 tons per acre), and a portion of the native shrubs, which would provide cover for hunting and habitat and forage for prey species.

Pursuant to SPR BIO-10, the RCD would assume presence of mountain lion, and Mitigation Measure BIO-2a would be required. Pursuant to Mitigation Measure BIO-2a, and because this species is a candidate for listing under CESA and is likely to be present year-around in the treatment area while foraging, the RCD must consult with CDFW about its determination that mortality, injury, or disturbance would not occur and that habitat function would be maintained. For the reasons summarized in the previous paragraph, the RCD determined that habitat function for mountain lion would be maintained after implementation of treatments and contacted CDFW to seek technical input on this determination, as required. On January 21, 2022, the RCD sent a memo to Robynn Swan from CDFW describing the measures that would be taken to avoid injury, mortality, or disturbance and maintain habitat function in compliance with Mitigation Measure BIO-2a. On February 4, 2022, RCD staff discussed the measures with Robynn Swan via conference call, and later that day the CDFW concurred via email with the proposed measures. Based on this consultation with CDFW, project specific refinements of Mitigation Measure BIO-2a will be implemented by the RCD as needed to avoid injury or mortality and maintain habitat function. SPRs applicable to this impact are BIO-1, BIO-2, BIO-10, HAZ-5, HAZ-6, and HYD-5. Mitigation Measure BIO-2a is also applicable to this impact.

This impact on mountain lion is within the scope of the PEIR because effects on burrowing or denning special-status wildlife, which includes mountain lion, were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Ringtail

Ringtail is a nocturnal species and typically occurs in riparian areas, forests (including stands of various ages), and shrub habitats. Potential denning or resting habitat includes large hardwoods, large conifers, snags, rock outcrops, crevices, brush, and slash piles. The ringtail breeding season occurs from February through June but peaks in March and April. Gestation is approximately 51 to 54 days, and females typically give birth to two to four kits from late-April or May to June. Once the kits are mobile, female ringtails will move to different dens with the kits.

Mechanical treatments and manual treatments that use mechanical tools (e.g., chainsaws) could result direct removal of ringtail dens, injury or mortality of individuals, and indirect adverse effects from noise and human/mechanical disturbance on denning ringtail. Herbicide treatments are not anticipated to have adverse disturbance effects because they would not result in direct removal of dens and the noise and disturbance would be far less than those for mechanical treatments and manual treatments that use mechanize tools. Due to this absence of disturbance effects, survey and buffer requirements would not apply to herbicide treatments. However, herbicide treatments have the potential for additional adverse effects due to accidental exposure to herbicides or contamination of water sources, which would be avoided and minimized by implementation of SPR HAZ-5, HAZ-6, and HYD-5. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events. The potential for treatment activities, including maintenance treatments, to result in adverse effects on ringtail was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184).

Per SPR BIO-1, if it is determined that adverse effects on special-status species can be clearly avoided by physically avoiding the suitable habitat or by conducting treatments outside of the season when a sensitive resource is present, then no additional action would be required. However, because ringtail could be present in multiple locations within the treatment area year-around and treatments would be implemented during the sensitive breeding season, there is no feasible way to avoid all potentially suitable habitat for this species during treatments or conduct treatment outside the sensitive season. Pursuant to SPR BIO-10, the RCD would assume presence of ringtail, and Mitigation Measure BIO-2a would be required.

Pursuant to Mitigation Measure BIO-2a, and because ringtail is a fully protect species under the California Fish and Game Code and is likely to be present year-around in the treatment area, the RCD must consult with CDFW about its determination that mortality, injury, or disturbance would not occur, and habitat function would be maintained. For

the reasons summarized below, the RCD determined that implementation of the project would maintain habitat function for ringtail and contacted CDFW to seek technical input on this determination and project-specific refinements to BIO-2a to avoid injury or morality to the species, as required. On January 21, 2022, the RCD sent a memo to Robynn Swan from CDFW describing the measures that would be taken to avoid injury or mortality and maintain habitat function in compliance with Mitigation Measure BIO-2a. On February 4, 2022, RCD staff discussed the measures with Robynn Swan via conference call, and later that day the CDFW concurred via email with the proposed measures.

Project-specific refinements to Mitigation Measure BIO-2a require a qualified RPF or biologist to conduct focused surveys for ringtail dens in the treatment area within 7 days prior to implementation of all mechanical treatments or manual treatments using mechanized equipment conducted in the maternity season (April 15 – June 30) to determine whether active ringtail dens are present. If active dens are observed during focused surveys, a no-disturbance buffer of at least 0.25 mile would be established around active ringtail dens, and no mechanical treatments or manual treatments using mechanized equipment would occur within this buffer during the maternity season. In addition, CDFW will be notified of the den and buffer location. CDFW will be provided an opportunity to visit the site and provide technical information on the size and shape of the den buffer. If active ringtail dens are not discovered during the focused surveys, daily sweeps of the treatment area will be conducted prior to the start of treatment activities for the day. If an active den is discovered during daily sweeps, a no-disturbance buffer will be applied and CDFW notified as discussed for focused surveys.

Mitigation Measure BIO-2a would be further refined as follows for mechanical treatments that occur outside of the maternity season. Heavy machinery activities will be conducted slowly and cautiously. For example, the head of a masticator will pause above a patch of heavy brush for several seconds before removing the brush, or a feller-buncher will pause next to a snag with a cavity before removing the snag. A qualified RPF or biologist will explain this process to contractors and will observe mechanical treatments on the first day of work to ensure that the methods are understood and implemented properly; this could be combined with other pre-activity surveys or contractor awareness training requirements. Contractors will watch for ringtail as they masticate in heavy brush or remove snags with cavities. If a ringtail is observed, the contractor will direct treatment activities to halt, and the ringtail will be allowed to leave the area unharmed before treatment begins. If a ringtail is observed outside of maternity season, the qualified RPF or biologist will be contacted and will perform a sweep of the treatment area before work resumes. If the qualified RPF or biologist observes a resting ringtail or active non-maternity den, treatment activities will not occur within that day's treatment area until the ringtail leaves the area on its own. If the qualified RPF or biologist observes a ringtail or confirms the contractor's observation (i.e., based on contractor description or photograph), the occurrence will be reported to CDFW.

The proposed initial and maintenance treatments are not expected to result in long term adverse effects on habitat for ringtail because native live trees greater than 12 inches dbh would not be removed. In addition, habitat features would be retained, such as downed wood greater than 12 inches in diameter (approximately 10 tons per acre), 1-2 snags greater than 12 inches dbh per acre, and a portion of native shrubs would be retained within the treatment area. SPRs applicable to this impact are BIO-1, BIO-2, BIO-10, HAZ-5, HAZ-6, and HYD-5. Mitigation Measure BIO-2a is also applicable to this impact.

This impact on ringtail is within the scope of the PEIR because effects on ringtail were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

American Badger

American badger is most often found in open stages of shrub, woodland, and herbaceous habitats and digs burrows for shelter and reproduction (CWHR 1990). Within maternity dens, pups are present between mid-February and early July. The forest within the treatment area was likely too dense before the 2020 CZU Lightning Complex to be suitable habitat for the species. However, the chaparral/coastal scrub habitats within the treatment area may have provided

habitat. In addition. habitat within the previously forested portions of the treatment area that exhibit high tree mortality are likely to become more open and suitable for the species after initial treatments are implemented.

Mechanical treatments and manual treatments implemented using mechanical tools (e.g., chainsaws) that occur within knobcone pine and coastal scrub habitats, as well as portions of the treatment area where high levels of tree mortality occurred in the 2020 CZU Lightning Complex, could result in disturbance of American badger dens. While herbicide treatments are not anticipated to result in den disturbance, potentially adverse impacts from exposure to herbicides could occur. The potential for additional adverse effects from herbicide treatments due to accidental exposure to herbicides or contamination of water sources would be avoided and minimized by implementation of SPR HAZ-5, HAZ-6, and HYD-5. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events. The potential for treatment activities, including maintenance treatments, to result in adverse effects on American badger was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184).

Per SPR BIO-1, if mechanical and manual treatments that use mechanical (noise-generating) tools would occur within suitable habitat during the American badger pupping season (February 15 – July 1), then SPR BIO-10 would apply, and focused surveys for American badger dens would be conducted prior to treatment activities. If American badgers are identified during focused surveys, Mitigation Measure BIO-2b would be implemented. Under Mitigation Measure BIO-2b, a no-disturbance buffer of 100 feet would be established around active maternity dens, and treatments would not occur within this buffer. Habitat function for American badger would be maintained by the project, because treatments would retain approximately 10 tons per acre of existing downed logs greater than 12 inches in diameter, and a portion of shrubs within the treatment area, which would provide cover and forage for prey species. SPRs applicable to this impact are BIO-1, BIO-2, BIO-10, HAZ-5, HAZ-6, and HYD-5. Mitigation Measure BIO-2b is also applicable to this impact.

This impact on American badger is within the scope of the PEIR because effects on American badger were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

San Francisco Dusky-footed Woodrat

Potentially suitable habitat for San Francisco dusky-footed woodrat is present within the treatment area. Woodrats construct nests, which are also known as houses or middens, with shredded grass, leaves, and other material. Woodrats use these nests during the breeding season and outside of the breeding season. The treatment area was burned in 2020 during the CZU Lighting Complex, and it is likely that most, if not all, nests in the area were destroyed. However, woodrat populations can recover less than one year following low intensity fire (Vreeland and Tietje 1998). While the 2020 CZU Lightning Complex burned the treatment area at a range of intensities, woodrats could have recolonized both moderate and low intensity burn areas within the treatment area.

Mechanical treatments and manual treatments that use mechanical tools may result in inadvertent disturbance to, injury to, or mortality of individual woodrats or destruction of nests by the presence of equipment and personnel, and could be inadvertently injured or killed or have their nests destroyed by heavy machinery, personnel, or vehicles. While herbicide treatments are not anticipated to result in disturbance of woodrats or nests, herbicide treatments also have the potential for adverse effects due to accidental exposure to herbicides or contamination of water sources. These adverse effects would be avoided and minimized by implementation of SPR HAZ-5, HAZ-6, and HYD-5. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events. The potential for treatment activities, including maintenance

treatments, to result in adverse effects on San Francisco dusky-footed woodrat was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-138 to 3.6-184).

Per SPR BIO-1, if it is determined that adverse effects on special-status species can be clearly avoided by physically avoiding the suitable habitat or by conducting treatments outside of the season when the species is present, then no additional action would be required. Because woodrats may be present within the treatment area due to suitable habitat and use their nests year-around, there is no reliable season during which impacts on this species could be avoided. As a result, SPR BIO-10 would apply, and focused surveys for San Francisco dusky-footed woodrats would be conducted within suitable habitat prior to implementation of mechanical or manual treatments that use mechanical tools. If woodrat nests are not detected within the treatment area during focused surveys, then mitigation for the species would not be required. If woodrat nests are detected during focused surveys, then Mitigation Measure BIO-2b would be implemented. Under Mitigation Measure BIO-2b, a no-disturbance buffer of 100 feet would be established around active woodrat nests during the breeding season (April through mid-July) to prevent accidental encroachment by vehicles, equipment, or personnel. If woodrat nests within the treatment area cannot be avoided by 100 feet, a qualified biologist will implement nest relocation procedures outside of the woodrat breeding season. The qualified biologist would determine whether the nest is active through live-trapping and would dismantle the woodrat nest by hand and rebuild the nest outside of the treatment area footprint.

Habitat function for San Francisco dusky-footed woodrat would be maintained after treatment implementation because treatments would retain approximately 10 tons per acre of logs greater than 12 inches in diameter and a portion of shrubs within the treatment area, which would provide cover and forage for prey species. SPRs applicable to this impact are BIO-1, BIO-2, BIO-10, HAZ-5, HAZ-6, and HYD-5. Mitigation Measure BIO-2b is also applicable to this impact.

This impact on San Francisco dusky-footed woodrat is within the scope of the PEIR because effects on San Francisco dusky-footed woodrat were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-3

Sensitive habitats analyzed in this PSA include riparian habitat, Sensitive Natural Communities as defined by CDFW (CDFW 2021), ESHA as defined by the Coastal Act Section 30107.5, and habitats identified as sensitive by the Santa Cruz County LCP (Santa Cruz County 1994). The LCP includes the following sensitive habitats that occur within Santa Cruz County: kelp beds, rocky intertidal areas, marine mammal hauling grounds, shorebird nesting areas, seabird and shorebird resting and roosting sites, dunes and coastal strand, cliff nesting areas, coastal scrub, wetlands, rivers and streams, intermittent wetlands, reservoirs and ponds, Santa Cruz long-toed salamander habitat, Santa Cruz cypress groves, San Andreas live oak woodland, maritime chaparral, indigenous ponderosa pine forest, indigenous Monterey pine forest, and grassland in the Coastal Zone.

Review of the Fire and Resource Assessment Program FVEG vegetation mapping of the treatment area from prior to the 2020 CZU Lightning Complex determined that the following vegetation types were present: annual grassland (0.69 acres), closed-cone pine-cypress (4.53 acres), coastal oak woodland (5.30 acres), coastal scrub (3.04 acres), montane hardwood conifer (24.97 acres), and redwood (22.19 acres). No riparian habitat was identified using FVEG.

A reconnaissance-level survey of the treatment area was conducted pursuant to SPR BIO-1 on October 15, 2021. During this reconnaissance-level survey, it was observed that the intensity of the burn from the 2020 CZU Lightning Complex was highly variable. The areas mapped in FVEG as closed-cone pine-cypress and coastal scrub experienced 100 percent reduction in canopy cover; although, resprouting was noted from root-crowns of manzanita and golden chinquapin. Standing dead knobcone pines were the only tree observed within the area mapped as closed-cone pine-cypress, which indicates that it was the dominant canopy tree before the fire. Similarly, tree mortality was high in the redwood stands on the slope above Whitehouse Creek and in the eastern portion of the treatment area, but many of these redwoods were not killed by the fire and are resprouting from trunks and branches. The fire was less

intense in other habitats within the treatment area, burning variable portions of the canopy cover, or remaining in the understory as was the case for portions of the redwood stands within Skylark Ranch and in Old Woman's Creek drainage. The small area mapped as annual grassland by FVEG was not burned by the fire and is mowed and used by Camp Skylark as an archery range.

Based on species ranges, occurrence data, vegetation mapping, aerial photos, and the reconnaissance-level survey of the treatment area, the following sensitive habitats (as identified in Coastal Act Section 30107.5, the LCP, Manual of California Vegetation, and CalVTP PEIR) are not anticipated to occur within the treatment area: kelp beds, rocky intertidal areas, marine mammal hauling grounds, shorebird nesting areas, seabird and shorebird resting and roosting sites, dunes and coastal strand, cliff nesting areas, wetlands, rivers and streams, reservoirs and ponds, Santa Cruz long-toed salamander habitat, Santa Cruz cypress groves, indigenous ponderosa pine forest, grassland in the coastal zone, Sargent cypress woodland, Monterey pygmy cypress stand, Monterey cypress stand, Bishop pine – Monterey pine forest, Santa Lucia fir grove, dune mat, sand dune sedge swath, giant coreopsis scrub, salt rush swale, silver dune lupine – mock heather scrub, and wax myrtle scrub.

While western azalea (*Rhododendron occidentale*), bigleaf maple (*Acer macrophyllum*), and California bay (*Umbellularia californica*) were not observed during reconnaissance-level surveys that occurred post-fire, these species could have occurred in the treatment areas pre-fire and if so, may have begun to re-establish and could establish in the future. In the area occupied by knobcone pine prior to the fire, the manzanita may be the dominant vegetation for many years while knobcone pines more slowly re-establish, resulting in a seral-stage chaparral community. Wetlands within the Coastal Zone may be delineated by a single wetland parameter (e.g., wetland hydrology) rather than the three parameters required to meet the state or federal definition of a wetland. The ephemeral drainages and intermittent stream that have been identified in the area are likely wetlands under the Coastal Zone definition and therefore are considered sensitive habitats, regardless of their status as waters of the United States or waters of the state. Aquatic resources that meet the federal or state definitions of wetlands, are addressed in Impact BIO-4 below.

Sensitive habitats and sensitive natural communities that may have occurred in the treatment area before the fire or may occur in the future following post-fire re-growth are listed in Table 4.5-2 below.

Table 4.5-2 Sensitive Habitats and Natural Communities Documented or with Potential to Occur in the Treatment Area

Sensitive Habitat/Sensitive Natural Community[1]	Rarity Rank	CWHR Type	Occurrence Potential
Redwood Forest	S3	Redwood	Known to Occur
Bigleaf Maple Forest	S3	Montane Hardwood Conifer	May Occur
California Bay Forest	S3	Coastal Oak Woodland	May Occur
Common Manzanita Chaparral *	S3	Mixed Chaparral *	May Occur
San Andreas Oak Woodland	LCP	Coastal Oak Woodland	May Occur
Shreve Oak Forest	S4	Coastal Oak Woodland	May Occur
Hazelnut Scrub	S2	Coastal Scrub	May Occur
Bush Monkeyflower Scrub	S3	Coastal Scrub	May Occur
California coffee berry - western azalea scrub - Brewer's willow	S3	Coastal Scrub	May Occur
Wetland (Coastal Zone)	NA	NA	Known to Occur

[1] These are designated sensitive natural communities with a state rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable), or designated as sensitive habitats in the LCP.

* Chaparral is not currently mapped within the treatment area in FVEG; however, this type may develop as a seral stage because of natural post fire regeneration within the currently mapped closed-cone pine-cypress habitat.

Source: CNPS 2021b, Compiled by Ascent Environmental in 2021

Other than the redwood stands left intact by the fire, the species composition and percent canopy cover of the sensitive habitats and sensitive natural communities in Table 4.5-2 have been substantially or catastrophically altered by the fire. Furthermore, it is not known if some of these communities will reestablish naturally for many years (e.g., San Andreas oak woodland, Shreve oak forest) due to the potential loss of seedbank, few surviving mature trees to disperse seeds, and relatively slow growth rates of these woody species. However, it is possible that occurrences of these species and communities could re-establish naturally, during the lifetime of this PSA, which has no expiration date under CEQA. In addition, and as explained above, in the area occupied by knobcone pine prior to the fire, natural regeneration of manzanita and knobcone pine may result in a seral-stage chaparral community. For these reasons, and due to the presence of suitable habitat for multiple special-status species within the treatment area (e.g., California red-legged frog), it is assumed that the treatment area can be defined as ESHA, using the definition in Coastal Act Section 30107.5. For discussion of how habitat will be maintained for special-status species, see Impact BIO-2 above.

The proposed project would facilitate restoration of sensitive natural communities by removing dead and dying trees and dead and dying understory that was not consumed by the 2020 CZU Lighting Complex, which would increase the health of remaining live trees and other vegetation within the treatment area and improve conditions for regeneration of healthy vegetation alliances that are representative of the region. The desired condition following treatment would be reestablishment of the existing vegetation communities at historical densities and appropriate seral-stage communities within the treatment area.

The proposed initial manual, mechanical, and herbicide treatments, maintenance treatments, and biomass disposal could have a direct or indirect effect on sensitive natural communities that occur within the treatment area, with the exception of redwood forest. The potential for treatment activities to result in adverse effects on riparian habitat or other sensitive natural communities was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-186 to 3.6-191).

The ecological restoration treatments that are proposed within forested portions of the treatment area would focus on removing dead and dying vegetation, invasive plants, and small diameter live trees, and would retain native live trees greater than 12 inches dbh (see Chapter 2, "Project Description") and retain existing native shrubs with approximately 25- 50 foot spacing, maintaining sensitive natural communities at the alliance level. The ecological restoration treatment would result in a modification of existing fuels that would provide ideal conditions to facilitate regeneration of those redwood stands where mortality was high and ultimately support native vegetative species regeneration. A proposed shaded fuel break would be created within a previously installed, but not maintained, fuel break along Old Woman's Creek Road. Additional fuel breaks would be installed along existing roads and trails within forested habitats in the treatment area. To create the shaded fuel breaks, the majority of the overstory canopy and existing native shrub cover at 25-50 foot spacing would be maintained, which would avoid the conversion of sensitive natural communities at the vegetation alliance level in these areas.

Ecological restoration treatments that occur within chaparral and coastal scrub dominated habitats will only occur following assessment of the naturally re-generating vegetation alliances, and determination of the natural fire return interval of the alliances present. Treatments will only occur within the natural fire return interval if it is determined, with substantial evidence, that habitat function would be improved. Furthermore, treatments will not result in conversion to another vegetation alliance, will not result in complete removal of the mature shrub layer; and if the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity per project specific refinements to SPR BIO-5. These measures related to existing shrub cover will also be applied to the knobcone pine area to reflect that a chaparral community may be dominant as natural post-fire regrowth occurs. Natural progression from seral-stage chaparral to knobcone pine forest is not considered typed conversion. In addition, project specific refinements to SPR BIO-5 require that habitat function be maintained, and would result in an appropriate percent cover of shrubs specific to the vegetation alliances that are determined to be present in the treatment area once post-fire regeneration has progressed to the point that alliances can be assessed.

Therefore, the proposed project would not have a substantial adverse direct or indirect effect on sensitive habitats or sensitive natural communities within the treatment area. Furthermore, to identify sensitive natural communities within the treatment area that are present before treatments, a qualified biologist or botanist would survey and map habitats

as required under SPR BIO-3. SPR BIO-3 requires a qualified biologist to conduct a survey following the CDFW "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" before the start of treatment activities (CDFW 2018). In addition, the RCD would implement SPR BIO-8 to identify and avoid adverse effects in ESHA, which requires consultation with the CCC, compliance with the PWP limitations on treatment actions, and monitoring. Also, SPR HYD-4 would avoid impacts to Coastal Act-defined wetlands that occur in the treatment area by establishing WLPZs ranging from 50 to 100 feet adjacent to any Class II streams within the treatment area, and WLPZs sufficient to prevent the degradation of downstream beneficial uses of water would be established around all Class III ephemeral streams within the treatment area. Other SPRs would be applied to further reduce the likelihood of adverse effects including implementation of SPR HAZ-5, HAZ-6, and HYD-5. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and runoff to non-target areas, and restrictions on application during precipitation events. SPRs applicable to this impact are BIO-1, BIO-2, BIO-3, BIO-5, BIO-6, BIO-8, BIO-9. HAZ-5, HAZ-6, HYD-4, and HYD-5.

This impact on riparian habitat or other sensitive natural communities is within the scope of the PEIR because the affected sensitive natural communities were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-4

Mechanical treatments and chipping and masticating of biomass during initial and maintenance treatments could have an adverse effect on state or federally protected wetlands by increasing runoff and potentially discharging sediment to protected waters. In addition, herbicide application could result in inadvertent contamination of state or federally protected wetlands. The potential for treatment activities to result in adverse effects on state or federally protected wetlands was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-191 to 3.6-192). Most of the aquatic habitat in the vicinity of the treatment area, including wetlands that could be state- or federally jurisdictional, has been excluded from the treatment area. However, based on review and survey of project-specific biological resources (SPR BIO-1), the portion of the treatment area within the Old Woman's Creek drainage may contain a small segment of an intermittent stream, and ephemeral channels are present in other locations within the Whitehouse Creek drainage portion of the treatment area, any of which could be state- or federally jurisdictional.

To avoid and minimize adverse effects on state or federally protected wetlands, SPR HYD-1 would be implemented, which requires treatments to comply with applicable water quality requirements adopted by the appropriate Regional Water Quality Control Board (RWQCB) and approved by the State Water Resources Control Board (SWRCB). The SWRCB is requiring all projects utilizing the CalVTP PEIR to follow the requirements of their Vegetation Treatment General Order, which would meet the requirements of SPR HYD-1. Users of the CalVTP PSA process are automatically enrolled in the general order and are required to implement all applicable SPRs and mitigation measures from the CalVTP PEIR. In addition, the general order requires project proponents to comply with any applicable Basin Plan prohibitions.

In addition, under SPR HYD-4, WLPZs ranging from 50 to 100 feet would be established adjacent to any Class II streams within the treatment area, and WLPZs sufficient to prevent the degradation of downstream beneficial uses of water would be established around all Class III ephemeral streams within the treatment area by an RPF or qualified biologist. In addition, indirect impacts to state or federally protected wetlands from herbicide application could also occur. SPRs would be applied to further reduce the likelihood of adverse effects including implementation of SPR HAZ-5, HAZ-6, and HYD-5. SPR HAZ-5 and HAZ-6 require safe handling of herbicides (e.g., according to a spill prevention and spill response plan) and compliance with current regulations for the transport, handling, application, and disposal of herbicides. SPR HYD-5 requires herbicide mixing sites be located away from non-target vegetation and waterways, use of dye in herbicides to avoid inadvertent overspray, measures to minimize herbicide drift and

runoff to non-target areas, and restrictions on application during precipitation events. SPRs applicable to this impact are BIO-1, BIO-2, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HYD-1, HYD-4, HAZ-5, and HAZ-6.

This impact on state or federally protected wetlands is within the scope of the PEIR because effects on state or federally protected wetlands was covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-5

Based on review of the Bay Area Critical Linkage Project mapping (Bay Area Conservation Network 2019), portions of the treatment area provided habitat connectivity for terrestrial wildlife species to move between the Cascade Creek and Gazos Creek watersheds prior to the 2020 CZU Lightning Complex; however, the existing use of the treatment area as a girl scout camp likely limits movement of species that are less tolerant to human disturbance when the camp is active. Habitat connectivity for some terrestrial wildlife species may have been altered by the fire, which reduced canopy and understory cover within the treatment area, and no known wildlife nursery sites or indications of nursery sites, such as deer fawning habitat or potential rookery trees with whitewash, were identified within the treatment area during implementation of SPR BIO-1. However, the natural habitat within treatment area may be used for movement and cover for common wildlife species. The potential for initial and maintenance treatment activities to result in adverse effects on wildlife movement corridors and nursery sites was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-192 to 3.6-196).

Initial and maintenance treatments would not remove native live trees greater than 12 inches dbh, would retain approximately 10 tons per acre of logs greater than 12 inches in diameter, and would retain a portion of native shrubs. No roads or other permanent barriers to wildlife movement would be constructed by the project. Therefore, implementation of initial and maintenance treatments would not result in a substantial change in the existing conditions that facilitate wildlife movement in treatment area. SPRs applicable to this impact are BIO-1, and HYD-1.

This impact on wildlife movement corridors and nursery sites is within the scope of the PEIR because effects on wildlife movement corridors and nursery sites were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-6

Initial and maintenance treatments could result in direct or indirect adverse effects resulting in reduction of habitat or abundance of common wildlife, including nesting birds, because habitat suitable for these species is present in locations throughout treatment area. Although the treatment area was burned during the 2020 CZU Lightning Complex, tree nesting birds are anticipated to use portions of the treatment area that provide enough canopy foliage to support nesting. Cavity nesting birds may utilize the existing standing dead trees within the treatment area, and habitat is also currently present for ground and shrub nesting species in some areas where burn intensity was low.

Initial treatments are planned to occur within, and maintenance treatments could occur during, portions of the nesting bird season (February 1–August 31). Therefore, treatment activities could result in direct loss of active nests or disturbance to active nests of cavity, ground, and shrub nesting species from auditory and visual stimulus (e.g., heavy equipment, chainsaws, vehicles, personnel), potentially resulting in abandonment and loss of eggs or chicks. The potential for treatment activities to result in adverse effects on habitat or abundance of common wildlife was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.6-197 to 3.6-198).

Because treatment would be implemented during the nesting season, SPR BIO-12 would apply, and a survey for common nesting birds would be conducted within the treatment area by a qualified RPF or biologist prior to treatment activities. If no active bird nests are observed during focused surveys, then additional measures would not

be required. If active nests of common birds or raptors are observed during focused surveys, disturbance to the nests would be avoided by, modifying treatments to avoid disturbance to the nests, deferring treatment until the nests are no longer active as determined by a qualified biologist, or establishing an appropriate buffer around the nests. Standard nest buffers would be 300 feet for non-raptors and 500 feet for raptors. Buffers may be modified by a qualified biologist based on rationale such as species sensitivity, vegetative cover, nest height, and topography that would attenuate noise and visual disturbance and may be reduced to a minimum of 100 feet. In addition, trees with visible nests will be retained, whether or not the nests occupied. SPRs applicable to this impact are BIO-1 and BIO-12.

This impact on habitat or abundance of common wildlife is within the scope of the PEIR because effects on habitat or abundance of common wildlife were covered in the PEIR, and the proposed treatment activities and intensity of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-7

The proposed project will occur within the Coastal Zone of Santa Cruz County; as such, the project must comply with the provisions of the Coastal Act and relevant LCP. The RCD developed and the CCC approved a PWP as a companion to the CalVTP to provide design standards for projects in the Coastal Zone and compliance with the LCP. The project would be implemented in compliance with the PWP and would therefore not result in a conflict with the LCP. The potential for the proposed treatments to conflict with local policies is within the scope of the PEIR because vegetation treatment locations, types, and activities are consistent with those analyzed in the PEIR. In addition, all projects implemented under the CalVTP would be required to comply with applicable local policies, plans, and ordinances, per SPR AD-3. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT BIO-8

This impact does not apply to the proposed project because the treatment area is not within the plan area of any adopted habitat conservation plan or natural community conservation plan. Therefore, this impact does not apply to the proposed project.

NEW BIOLOGICAL RESOURCE IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment 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 RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances are present that would give rise to any new significant impacts not addressed in the PEIR. Therefore, no new impact related to biological resources would occur that is not covered in the PEIR.

4.6 GEOLOGY, SOILS, PALEONTOLOGY, AND MINERAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
Impact GEO-1: Result in Substantial Erosion or Loss of Topsoil	LTS	Impact GEO-1, pp. 3.7-26 – 3.7-29	Yes	HYD-4 GEO-1 GEO-2 GEO-3 GEO-4 GEO-5 GEO-7 GEO-8	NA	LTS	No	Yes
Impact GEO-2: Increase Risk of Landslide	LTS	Impact GEO-2, pp. 3.7-29 – 3.7-30	Yes	GEO-3 GEO-4 GEO-8	NA	LTS	No	Yes

[1] LTS = less than significant.

[2] 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 treatment project.

New Geology, Soils, Paleontology, and Mineral Resource Impacts: Would the treatment result in other impacts to geology, soils, paleontology, and mineral resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.6.1 Discussion

IMPACT GEO-1

Initial and maintenance treatments would include manual and mechanical treatment activities involving vegetation removal and soil disturbance, which have the potential to increase rates of erosion and loss of topsoil. The potential for these treatment activities to cause substantial erosion or loss of topsoil was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.7-26 to 3.7-29). Mechanical treatments using heavy machinery are the most likely to cause soil disturbance that could lead to substantial erosion or loss of topsoil, especially in areas with steep slopes. The proposed project would implement mechanical treatments on up to all 60 acres of the treatment area, including areas where steep slopes occur, and where burn scars from the 2020 CZU Fire Complex are present. Consistent with the PEIR, SPRs GEO-1 through GEO-5, GEO-7, GEO-8, and HYD-4 and would be implemented, which would avoid and minimize the risk of substantial erosion and loss of topsoil as a result of project implementation. This impact is within the scope of the PEIR because the proposed treatment activities and intensity of vegetation removal and potential associated soil disturbance under the proposed project is consistent with what was analyzed in the PEIR. Therefore,

this impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT GEO-2

Initial and maintenance treatments would include vegetation removal in areas with steep slopes, which could decrease the stability of slopes and increase the risk of landslides. The potential for treatment activities to increase landslide risk was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.7-29 to 3.7-30). The treatment area contains steep slopes, where geomorphic features indicate that the area is susceptible to landslides, and landslides may have historically occurred in the area (DOC 2015).

Removing vegetation during treatments implemented under the proposed project could potentially increase the risk of landslide by removing root systems that stabilize slopes. Consistent with the PEIR, this risk is addressed with the implementation of SPRs GEO-3, GEO-4, and GEO-8, which require the stabilization of mechanically disturbed soil, erosion monitoring, and that a registered professional forester or licensed geologist evaluate treatment areas with slopes greater than 50 percent for unstable areas. This impact is within the scope of the PEIR because the extent and methods of vegetation removal and required avoidance of steep slopes and areas of instability are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW GEOLOGY, SOILS, PALEONTOLOGY, AND MINERAL RESOURCE IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they 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). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to geology, soils, paleontology, and mineral resources would occur that is not covered in the PEIR.

4.7 GREENHOUSE GAS EMISSIONS

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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	NA	None	SU	No	Yes

[1] LTS = less than significant; PSU = potentially significant and unavoidable.

[2] 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 treatment project.

New GHG Emissions Impacts: Would the treatment result in other impacts to GHG emissions that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.7.1 Discussion

IMPACT GHG-1

Use of vehicles and equipment during initial and maintenance vegetation treatments and biomass disposal would generate 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 pp. 3.8-10 and 3.8-11). Consistent with the PEIR, although GHG emissions would occur from equipment and vehicles used to implement treatments, the purpose of the proposed project is to reduce wildfire risk and increase post-wildfire resilience, which could reduce GHG emissions and increase carbon sequestration over the long-term. This impact is within the scope of the PEIR because the proposed treatment activities, associated equipment, duration of use, and resultant GHG emissions, as well as the project purpose, are consistent with those analyzed in the PEIR. No SPRs are needed to maintain this impact at less than significant, consistent with the significance determination in the PEIR. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT GHG-2

Use of vehicles and equipment during initial and maintenance vegetation treatments and biomass disposal would generate GHG emissions. The potential for treatments under the CalVTP to generate GHG emissions was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.8-11 through 3.8-17). Consistent with the PEIR, treatment activities implemented under the proposed project would result in GHG emissions directly generated by off-road equipment, on-road vehicles, worker commute trips, and hauling of equipment and materials associated with mechanical treatment activities. However, unlike under the CalVTP, no prescribed burning, which results in substantially more GHG emissions than mechanical treatments, would occur under the proposed project. Nonetheless, this impact would be potentially significant under the proposed project. Mitigation Measure GHG-2 would not be applicable to the proposed project because it requires GHG emissions reduction techniques to be implemented during prescribed burning, which is not a proposed treatment activity. Other measures could include the purchase and retirement of carbon credits to offset the one-time GHG emissions directly associated with the proposed project; however, this approach would consume financial resources needed to achieve wildfire risk reduction objectives. No other feasible and effective mitigation exists that would reduce this impact to a less-than-significant level without compromising the effectiveness of the proposed project. 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. In addition, the goals of the proposed vegetation treatments is to increase the health and vigor of retained vegetation and reduce wildfire risk, which would reduce GHG emissions resulting from wildfire and sequester carbon as vegetation matures. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW IMPACTS RELATED TO GHG EMISSIONS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.8.1, "Environmental Setting," and Section 3.8.2, "Regulatory Setting," in Volume II of the Final PEIR). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to GHG emissions would occur that is not covered in the PEIR.

4.8 ENERGY RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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

[1] LTS = less than significant.

[2] 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 treatment project.

New Energy Resource Impacts: Would the treatment result in other impacts to energy resources that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.8.1 Discussion

IMPACT ENG-1

The use of vehicles and equipment during initial and maintenance treatments as well as biomass disposal by chipping and mastication would result in the consumption of energy through the use of fossil fuels. The use of fossil fuels for equipment and vehicles was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.9-7 and 3.9-8). Consistent with the PEIR, and in consideration of the project's purpose to reduce wildfire occurrence and severity, implementation of the proposed treatment types is reasonably expected to reduce the intensity of response to wildfire, specifically the resources needed for fire suppression (e.g., equipment and vehicles). With less intense wildfire suppression response and its relatively inefficient consumption of energy, fuel and energy consumption for wildfire suppression response would decrease, as well. The consumption of energy during implementation of the proposed treatment project from the use of equipment and vehicles is within the scope of the PEIR because the types of activities, as well as the associated equipment and duration of proposed use, are consistent with those analyzed in the PEIR. Therefore, this impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW ENERGY RESOURCE IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.9.1, "Environmental Setting," and Section 3.9.2,

"Regulatory Setting," in Volume II of the Final PEIR). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to energy use would occur that is not covered in the PEIR.

4.9 HAZARDOUS MATERIALS, PUBLIC HEALTH AND SAFETY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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	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 HAZ-6 HAZ-7 HAZ-8	NA	LTS	No	Yes
Impact HAZ-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites	LTSM	Impact HAZ-3, pp. 3.10-18 – 3.10-19	Yes	NA	HAZ-3	LTSM	No	Yes

[1] LTS = less than significant; PS = potentially significant.

[2] 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 treatment project.

New Hazardous Materials, Public Health and Safety Impacts: Would the treatment result in other impacts related to hazardous materials, public health and safety that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.9.1 Discussion

IMPACT HAZ-1

Initial and maintenance treatments would include manual and mechanical treatments and may include herbicide application; manual and mechanical treatment activities would require the use of equipment and associated common hazardous materials such as fuels and lubricants. The potential for treatment activities to create a significant health hazard from the use of hazardous materials was evaluated in the PEIR (CalVTP Final PEIR Volume II pp. 3.10-14 to 3.10-15). The potential impacts related to the use of common hazardous materials during treatment activities are within the scope of the PEIR because the treatment types, equipment, and types of hazardous materials to be used are consistent with those analyzed in the PEIR. SPR HAZ-1 would be applicable to the proposed project. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT HAZ-2

Proposed initial and maintenance treatments include targeted application of herbicides that would require the transport, storage, and disposal of various herbicides. The potential for the use of herbicides to create a significant health hazard was analyzed in the PEIR (CalVTP Final PEIR Volume II pp. 3.10-15 to 3.10-18). Consistent with the PEIR, SPRs HAZ-5 through HAZ-8 would be implemented, which require the preparation of a spill prevention and response plan, compliance with applicable regulations by the County's Agricultural Commission, triple rinsing of herbicide containers before disposal, and measures to minimize herbicide drift to non-target areas. This impact is within the scope of the PEIR because the specific herbicides that would be used and methods of application are consistent with those analyzed in the PEIR. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT HAZ-3

Initial and maintenance vegetation treatments would include soil disturbance through mechanical treatment activities, which could expose workers or the environment to hazardous materials if a contaminated site is present within the treatment area. The potential for treatment activities to encounter contamination that could expose workers or the environment to hazardous materials was examined in the PEIR (CalVTP Final PEIR Volume II Volume II 3.10-18 to 3.10-19). This impact was identified as potentially significant in the PEIR because hazardous materials sites could be present within treatment sites throughout the large geographic extent of the treatable landscape, and the feasibility of implementing mitigation for exposure of people or the environment to hazards resulting from soil disturbance in a hazardous materials site was uncertain.

As directed by Mitigation Measure HAZ-3, a database search and review of the Cortese List via the State Water Resource Control Board's (SWRCB) GeoTracker database was conducted for hazardous materials sites. No sites with record of contamination were found in the proposed treatment area or within 0.50-mile of the treatment area (SWRCB 2021). Therefore, the risk of exposing the public or environment to significant hazards from the disturbance of a known hazardous material site is extremely low. After implementation of Mitigation Measure HAZ-3, which did not identify any sites, this impact would be less than significant, which is less severe than the significant and unavoidable impact identified in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW HAZARDOUS MATERIALS, PUBLIC HEALTH AND SAFETY IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.10.1, "Environmental Setting," and Section 3.10.2, "Regulatory Setting," in Volume II of the Final PEIR). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to hazardous materials and public health and safety would occur that is not covered in the PEIR.

4.10 HYDROLOGY AND WATER QUALITY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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	No	--	--	--	--	--
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	HYD-1 HYD-2 HYD-4 HYD-6 GEO-1 GEO-2 GEO-3 GEO-4 GEO-7 GEO-8 HAZ-1	NA	LTS	No	No
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	No	--	--	--	--	--
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	LTS	Impact HYD-4, pp. 3.11-30 – 3.11-31	Yes	HYD-1 HYD-5 HAZ-5 HAZ-6 HAZ-7 HAZ-8	NA	LTS	No	Yes

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
Impact HYD-5: Substantially Alter the Existing Drainage Pattern of a Treatment Site or Area	LTS	Impact HYD-5, p. 3.11-31	Yes	HYD-1 HYD-2 HYD-4 HYD-6 GEO-1 GEO-2 GEO-5	NA	LTS	No	Yes

[1] LTS = less than significant.

[2] 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 treatment project.

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?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.10.1 Discussion

IMPACT HYD-1

This impact does not apply to the proposed project because no prescribed burning would occur.

IMPACT HYD-2

Initial treatments and maintenance activities would include manual and mechanical treatment activities. These treatment activities, as well as biomass disposal through mastication and chipping, would disturb soils and require the use of fuels, which have the potential to enter waterways and degrade water quality. The potential for treatment activities to violate water quality regulations or degrade water quality was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.11-27 to 3.11-29). This impact is within the scope of the PEIR because the types and locations of treatment activities and use of heavy equipment to remove and process vegetation are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are HYD-1, HYD-2, HYD-4, HYD-6, GEO-1 through GEO-4, GEO-7, GEO-8, and HAZ-1. In addition, the SWRCB is requiring all projects utilizing the CalVTP PEIR to follow the requirements of their Vegetation Treatment General Order, which would meet the requirements of SPR HYD-1. Refer to Impact BIO-4 in Section 4.5, "Biological Resources," above for more information. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT HYD-3

This impact does not apply to the proposed project because no prescribed herbivory would occur.

IMPACT HYD-4

Initial and maintenance treatment activities would include ground application of herbicides, which can affect water quality through runoff, leaching, drifting, and misapplication or spills. The potential for herbicide treatment activities to 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 was evaluated in the PEIR (CalVTP Final PEIR Volume II pp. 3.11-29 and 3.11-30). The potential impacts are within the scope of the PEIR because the types of herbicides that would be used, the methods of herbicide application, and the transportation, storage, and disposal of herbicides are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are HYD-1, HYD-5, HAZ-5, HAZ-6, HAZ-7, and HAZ-8. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT HYD-5

Use of mechanical equipment and off-road vehicles during initial and maintenance treatments could cause ground disturbance and erosion, which could directly or indirectly modify existing drainage patterns. The potential for treatment activities to substantially alter the existing drainage pattern of a treatment site was examined in the PEIR (CalVTP Final PEIR Volume II 3.11-30 and 3.11-31). This impact is within the scope of the PEIR because the types and locations of treatments and treatment intensity are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are HYD-1, HYD-2, HYD-4, HYD-6, GEO-1, GEO-2, and GEO-5. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW HYDROLOGY AND WATER QUALITY IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (CalVTP Final PEIR Volume II p. 3.11-1 through 3.11-2). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to hydrology and water quality would occur that is not covered in the PEIR.

4.11 LAND USE AND PLANNING, POPULATION AND HOUSING

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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 AD-9	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

[1] LTS = less than significant.

[2] 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 treatment project.

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?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.11.1 Discussion

IMPACT LU-1

Initial and maintenance vegetation treatments would occur within Skylark Ranch Girl Scout Camp in western Santa Cruz County. The potential for vegetation treatments to cause a significant environmental impact due to the conflict with a land use plan, policy, or regulation was evaluated in the PEIR (CalVTP Final PEIR Volume II p. 3.12-13 and 3.12-14). This impact is within the scope of the PEIR because the treatment locations, types, and activities associated with the project are consistent with those analyzed in the PEIR. SPRs AD-3 and AD-9 are applicable to this impact and would avoid and minimize the risk of significant environmental impact due to conflicts with a land use plan, policy, or regulation. The RCD will comply with the Coastal Act through its existing PWP; the treatment design and this PSA are consistent with the requirements of the PWP. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT LU-2

Initial and maintenance treatments would involve manual and mechanical treatment activities and herbicide application and would require one crew of up to 10 people at a given time. The potential for treatments to result in

substantial population growth as a result of increases in demand for employees was analyzed in the PEIR (CalVTP Final PEIR Volume II pp. 3.12-14 and 3.12-15). Impacts associated with short-term increases in demand for employees during the implementation of the proposed project are within the scope of the PEIR because the number of workers required for implementation of the treatments is consistent with the crew size analyzed in the PEIR for the types of treatment activities proposed (i.e., two to 10 workers for mechanical treatments, and up to 10 workers for manual treatments). Employing local contractors would be encouraged and accommodating up to 10 new contractors would not result in substantial unplanned population growth or cause a need for new housing or other infrastructure. For the reasons described above, this impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW LAND USE AND PLANNING, POPULATION AND HOUSING IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (CalVTP Final PEIR Volume II p. 3.12-1 through 3.12-2). The RCD has also determined that the circumstances under which the proposed project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to land use and planning or population and housing would occur that is not covered in the PEIR.

4.12 NOISE

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[2]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[3]	List MMs Applicable to the Treatment Project[3]	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?
Would the project:								
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 NOI-6	NA	LTS	No	Yes
Impact NOI-2: Result in a Substantial Short-Term Increase in Truck-Generated SENL's[1] During Treatment Activities	LTS	Impact NOI-2, p. 3.13-12	Yes	NOI-1	NA	LTS	No	Yes

[1] SENL = single event noise level.
[2] LTS = less than significant.
[3] 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 treatment project.

New Noise Impacts: Would the treatment result in other noise-related impacts that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.12.1 Discussion

IMPACT NOI-1

Initial and maintenance treatments would require the use of noise-generating equipment during manual and mechanical treatment activities and biomass disposal. The potential for a substantial short-term increase in ambient noise levels from use of heavy equipment was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.19-9 to 3.13-12). The Santa Cruz County Code includes a section on "Offensive Noise." An "offensive noise" is any noise which is loud, boisterous, irritating, penetrating, or unusual, or that is unreasonably distracting in any other manner such that it is likely to disturb people of ordinary sensitivities in the vicinity of such noise, and includes, but is not limited to, noise made by an individual alone or by a group of people engaged in any business, activity, meeting, gathering, game, dance, or amusement, or by any appliance, contrivance, device, tool, structure, construction, vehicle, ride, machine, implement, or instrument. Noise is considered offensive during daytime hours (i.e., if it occurs between 8:00 a.m. and 10:00 p.m.) if it is clearly discernible at a distance of 150 feet from the property line of the property from which it is broadcast. Noise limits under the code are more stringent during the nighttime and early morning hours,

between the hours of 10:00 p.m. and 8:00 a.m. (Sana Cruz County Code Section 8.30.010). These daytime noise limits would apply to the proposed vegetation treatment activities. All treatments would be limited to daytime hours.

There is one caretaker residence located on the Skylark Ranch property, and other residents are located in the vicinity of the proposed treatments. However equipment use would be intermittent, move throughout the treatment areas, and several SPRs would be implemented, including AD-3 and NOI-1 through NOI-5. For any properties where residences are within 1,500 feet of a treatment area (e.g., the caretaker residence), SPR NOI-6 would also apply. This impact is within the scope of the PEIR, because the number and types of equipment proposed, and the duration of equipment use are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT NOI-2

Initial and maintenance treatments would involve large trucks hauling heavy equipment to the treatment area. These haul truck trips could pass by residential receptors, and the event of each truck passing by could increase single-event noise levels (SENLs). The potential for a substantial short-term increase in SENLs was examined in the PEIR (CalVTP Final PEIR Volume II p. 3.13-12). This impact is within the scope of the PEIR because the number and types of equipment proposed are consistent with those analyzed in the PEIR. The haul trips associated with the proposed treatments would occur during daytime hours, which avoids the potential to cause sleep disturbance to residents during the more noise-sensitive evening and nighttime hours. SPR NOI-1 would be applicable to the proposed project. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW NOISE IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.13.1, "Environmental Setting," and Section 3.13.2, "Regulatory Setting," in Volume II of the Final PEIR). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to noise would occur that is not covered in the PEIR.

4.13 RECREATION

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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	AES-2 NOI-3	NA	LTS	No	Yes

[1] LTS = less than significant.
[2] 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 treatment project.

New Recreation Impacts: Would the treatment result in other impacts to recreation that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.13.1 Discussion

IMPACT REC-1

The proposed project would occur entirely within property owned by the Girl Scouts of Northern California, which operates as Skylark Ranch Girl Scout Camp and is currently closed due to the 2020 CZU Lightning Complex (Girl Scouts of North America 2021); the treatment area is not within a publicly accessible recreation area. However, the treatment area may be visible from public hiking trails that are part of public recreation areas, such as Big Basin State Park, providing intermittent ridgeline views of the areas proposed for treatment. In addition, treatment activities and biomass disposal using mechanized equipment (e.g., chainsaws, masticators) could be audible from public recreation area when in use.

Initial and maintenance treatments would consist of manual and mechanical treatment activities and herbicide application, and biomass disposal would consist of mastication and chipping vegetative material. These vegetation treatment activities have the potential to disrupt recreational activities by degrading the experience of recreationists through the creation of noise or degradation of scenic views. The potential for vegetation treatment activities to disrupt recreation activities was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.2-16 through 3.2-19).

The potential for the proposed project to disrupt recreation is within the scope of the PEIR because the treatment activities and intensity are consistent with those analyzed in the PEIR. SPR AES-2 and NOI-3 would be applicable to the proposed project. In addition, the current condition of the treatment is dead and dying trees and vegetation; the project allows for regeneration of native vegetation, which would be expected to improve views of the treatment area over the long-term. Furthermore, coastal public access and recreational opportunities would not be affected during

project operations. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW RECREATION IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. the RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (CalVTP Final PEIR Volume II, pp. 3.14-1 and 3.14-2). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to recreation would occur that is not covered in the PEIR.

4.14 TRANSPORTATION

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[2]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[3]	List MMs Applicable to the Treatment Project[3]	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?
Would the project:								
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	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	NA	LTS	No	Yes
Impact TRAN-3: Result in a Net Increase in VMT[1] for the Proposed CalVTP	PSU	Impact TRAN-3 pp. 3.15-11 – 3.15-13	Yes	NA	None	LTS	No	Yes

[1] VMT = vehicle miles traveled.

[2] LTS = less than significant; PSU = potentially significant and unavoidable.

[3] 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 treatment project.

New Transportation Impacts: Would the treatment result in other impacts to transportation that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.14.1 Discussion

IMPACT TRAN-1

Initial and maintenance vegetation treatments would temporarily increase vehicular traffic along several roads in the project area, including Old Woman's Creek Road, White House Creek Road, Whitehouse Canyon Road, and SR-1. The potential for a temporary increase in traffic to conflict with a program, plan, ordinance, or policy addressing roadway facilities or prolonged road closures was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.15-9 and 3.15-10). The proposed initial treatments would be short-term, occurring over approximately 40 days, and few new vehicle trips would be created due to the small treatment crew that would be used (i.e., up to 10 crew members). Furthermore, all biomass would remain onsite and would not result in additional vehicle trips. Traffic operations related impacts would be temporary and minor and would not result in a conflict with a program, plan, ordinance, or policy addressing roadway facilities or result in any road closures.

Temporary increases in traffic related to treatments are within the scope of the PEIR because the treatment duration and limited number of vehicles required for equipment transport, vehicles for crew transport are consistent with those analyzed in the PEIR. Only SPR AD-3 would be applicable to the proposed project. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT TRAN-2

Initial and maintenance vegetation treatments would not require the construction or alteration of any roadways. However, the proposed treatments would require the transportation of heavy equipment along small and mountainous roadways, which could create increased transportation hazards due to incompatible uses. The potential for the hauling of machinery to remote treatment areas was examined in the PEIR (CalVTP Final PEIR Volume II pp. 3.15-10 and 3.15-11). This impact is within the scope of the PEIR because the quantity and types of equipment proposed for use that would require transport to treatment areas are the same as those analyzed in the PEIR. In addition, the transport of equipment would be infrequent and dispersed on multiple roadways, occurring at the start and the end of treatment activities, and would only require a few trips. Only SPR AD-3 is applicable to this impact. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT TRAN-3

Implementation of initial and maintenance treatments could temporarily increase vehicle miles traveled (VMT) above baseline conditions because the proposed project would require vehicle trips to transport crew members and equipment to the treatment areas. This impact was addressed in the PEIR and was identified as potentially significant and unavoidable in the PEIR because implementation of the CalVTP would result in a net increase in VMT (CalVTP Final PEIR Volume II pp. 3.15-11 to 3.15-13). However, as noted under Impact TRAN-3 in the PEIR, individual vegetation treatment projects under the CalVTP are reasonably expected to generate fewer than 110 trips per day, which would 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 (OPR 2018).

Initial and maintenance treatments would require up to 10 crew members at any one time, and the initial treatments would occur over approximately 40 days. All biomass would remain onsite. Crew sizes are sufficiently small such that the total increase in VMT would be well below 110 trips per day. In addition, the increase in vehicle trips would be temporary, lasting only the length of project implementation. A temporary increase in VMT is within the scope of the activities and impacts addressed in the PEIR because the number and duration of increased vehicle trips are consistent with that analyzed in the PEIR. This impact would be less than significant, and Mitigation Measure AQ-1 would not be required for this impact of the proposed project. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

NEW TRANSPORTATION IMPACTS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (CalVTP Final PEIR Volume II, pp. 3.15-1 to 3.15-2). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to transportation would occur that is not covered in the PEIR.

4.15 PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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	No	--	--	--	--	--
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	No	--	--	--	--	--

[1] LTS = less than significant; PSU = potentially significant and unavoidable.

[2] 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 treatment project.

New Public Services, Utilities and Service System Impacts: Would the treatment result in other impacts to public services, utilities and service systems that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.15.1 Discussion

IMPACT UTIL-1

Initial and maintenance treatments would include mechanical and manual treatment activities and herbicide application. Water would be required during implementation of the proposed project as a safety measure for fire suppression (i.e., 5,000 gallon trailer with a pump), and to minimize dust if excessive dust while traveling on unpaved roads or to remove visible dirt or mud that gets tracked out onto public paved roadways, pursuant to SPR AQ-4. The potential increase in water demand as a result of treatment activities was examined in the PEIR (CalVTP Final PEIR Volume II p. 3.16-9).

The most water-intensive activities described in the PEIR include the provision of onsite water for prescribed burning and during vegetation removal for nonshaded fuel breaks. The proposed project would not create nonshaded fuel

breaks or implement prescribed burning. This impact is within the scope of the PEIR because the treatment types and activities are consistent with those included in the PEIR and the amount of water required during project implementation is consistent with, although less than, what is analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT UTIL-2

Vegetation treatments would generate biomass as a result of vegetation removal within the treatment areas. Biomass generated by mechanical and manual treatments would be disposed of primarily through chipping and masticating. This impact was identified as potentially significant and unavoidable in the PEIR because biomass hauled offsite could exceed the capacity of existing infrastructure for handling biomass. For the proposed treatment project, no biomass would be hauled offsite; therefore, there is no potential to exceed the capacity of existing infrastructure, and this impact does not apply to the proposed project.

IMPACT UTIL-3

This impact does not apply to the proposed project because all biomass generated from the proposed treatments would be disposed of onsite.

NEW IMPACTS TO PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.16.1, "Environmental Setting," and Section 3.16.2, "Regulatory Setting," in Volume II of the Final PEIR). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to public services or utilities and service systems would occur that is not covered in the PEIR.

4.16 WILDFIRE

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR[1]	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[2]	List MMs Applicable to the Treatment Project[2]	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?
Would the project:								
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	No	--	--	--	--	--

[1] LTS = less than significant.

[2] 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 treatment project.

New Wildfire Impacts: Would the treatment result in other impacts related to wildfire that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
NA	☐	☐	☐

4.16.1 Discussion

IMPACT WIL-1

Initial and maintenance treatments would include mechanical treatments using heavy equipment and manual treatments using mechanized hand tools, which could exacerbate fire risk if accidental ignition occurred from heat or sparks contacting vegetation. The potential exacerbation of wildfire risk and increase in exposure to wildfire as a result of vegetation treatments was evaluated in the PEIR (CalVTP Final PEIR Volume II pp. 3.17-14 to 3.17-15). Increased wildfire risk associated with the use of mechanized equipment in vegetated areas is within the scope of the PEIR because the types of equipment, proposed treatment activities, and treatment duration are consistent with those analyzed in the PEIR. In addition, no prescribed burning would occur under the proposed project. Furthermore, the treatments would reduce wildfire risk in the long term by returning the landscape to a more natural condition and creating shaded fuel breaks to decrease wildfire spread and provide areas for wildfire suppression in the event of a wildfire. SPRs that would be applicable are HAZ-2, HAZ-3, and HAZ-4, which would minimize the risk of accidental ignition. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

IMPACT WIL-2

The proposed project would not implement prescribed burning during any phase of implementation, including maintenance treatments, which could result in post-fire flooding or landslides. It also does not include new housing, nor would it result in population growth, thereby potentially exposing more people to postfire risks of flooding or landslides. Furthermore, because the treatments would reduce wildfire risk, they would also decrease post wildfire landslide and flooding risk in areas that could otherwise burn in a high-severity wildfire without treatment. Therefore, this impact does not apply to the project.

NEW IMPACTS TO WILDFIRE

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The RCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.17.1, "Environmental Setting," and Section 3.17.2, "Regulatory Setting," in Volume II of the Final PEIR). The RCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to wildfire would occur that is not covered in the PEIR.

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Appendix A

Mitigation Monitoring and
Reporting Program for the
Skylark Ranch Forest Health Project

MITIGATION MONITORING AND REPORTING PROGRAM

INTRODUCTION

The Resource Conservation District of Santa Cruz County (RCD) prepared a Project-Specific Analysis (PSA) under the California Vegetation Treatment Program (CalVTP) for the Skylark Ranch Forest Health Project (project or proposed project). The California Environmental Quality Act (CEQA) and the State CEQA Guidelines (PRC Section 21081.6 and State CEQA Guidelines Sections 15091[d] and 15097) require public agencies "to adopt a reporting and monitoring program for changes to the project which it has adopted or made a condition of project approval to mitigate or avoid significant effects on the environment." A Mitigation Monitoring and Reporting Program (MMRP) is required for approval of the proposed project because the PSA identifies potential significant adverse impacts and all feasible mitigation measures have been adopted. Standard project requirements (SPRs), which are part of the project description, have been defined to avoid or minimize adverse effects. Where potentially significant impacts remain after application of SPRs, mitigation measures have been identified to further reduce and/or compensate for those impacts. While only mitigation measures are required to be covered in an MMRP, both SPRs and mitigation are included in this MMRP to assist in implementation of all required environmental protection features for project activites.

The RCD's certified Santa Cruz County Forest Health and Fire Resilience Public Works Plan (PWP) is a companion to the CalVTP that provides a streamlined mechanism for Coastal Act compliance through the submittal and approval of Notice of Impending Developments (NOIDs) for individual projects. The PWP requires adherence to Coastal Vegetation Treatment Standards (CVTS) approved as part of the PWP and additional information about project design within the Santa Cruz County Coastal Zone. As the responsible agency under CEQA and administrator of the PWP, the RCD is responsible for the overall administration of this project-specific MMRP and ensuring compliance with the Coastal Act. Where Coastal Act requirements differ from or are more protective than the CalVTP SPRs and mitigation measures in the PSA, they have been integrated into the SPRs and mitigation measures for the project as project-specific implementation directives (e.g., specific no-disturbance buffers for nesting birds, larger no-activity buffer for discovered native American sites and human remains).

PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

This MMRP has been prepared to facilitate the implementation of SPRs and mitigation measures. The attached table presents the text of each SPR and mitigation measure from the CalVTP PEIR that is applicable to the project, the timing of its planned implementation, the implementing entity, and the entity with monitoring responsibility. The numbering of SPRs and mitigation measures follows the numbering used in the PEIR. SPRs and mitigation measures that are referenced more than once in the PSA are not duplicated in the MMRP. Instructions for project-specific implementation of certain SPRs and mitigation measures has been added to tailor the specific impact avoidance and minimization actions relevant to the proposed treatments, agency standard practices, the conditions and resources present within each treatment site, and to comply with the requirements of the PWP. In all cases, additional project-specific implementation instruction and clarifying edits to mitigation measures maintain the SPRs and mitigation measures as equivalent or more effective than those presented in the CalVTP PEIR.

ROLES AND RESPONSIBILITIES

As the responsible agency under CEQA and administrator of the PWP, the RCD is responsible for the overall administration of this project-specific MMRP and for ensuring that implementation of the mitigation measures and SPRs occurs in accordance with this MMRP.

The RCD will implement the initial treatments beginning in May 2022. Maintenance treatments are expected to occur annually by the landowner, the Girl Scouts of Northern California (GSNCA). In all cases, the RCD will adhere to this

MMRP to fulfill its requirements for CEQA and Coastal Act compliance. The GSNCA would be required to implement treatments consistent with the PSA, CVTS, and the mitigation measures and SPRs in this MMRP if they are using the PWP for Coastal Act compliance. In this circumstance, the RCD is responsible for ensuring that the treatments conducted by the GSNCA are implemented consistent with all applicable SPRs and mitigation measures and reporting and coordination is completed pursuant to the RCD's obligations under the PWP.

As specified herein, the RCD and GSNCA are responsible for taking all actions necessary to implement the mitigation measures according to the specifications provided for each measure, and for demonstrating that the action has been successfully completed. The RCD will be responsible for mitigation monitoring and reporting as described in Section 15097 of the State CEQA Guidelines.

REPORTING

The RCD shall document and describe the compliance of project treatment work with the required SPRs and mitigation measures either by adapting the project-specific MMRP table below or preparing a separate post-project implementation report pursuant to the requirements of SPR AD-7.

MITIGATION MONITORING AND REPORTING PROGRAM TABLE

The categories identified in the attached MMRP table are described below.

- SPRs and Mitigation Measures – This column provides the verbatim text of the applicable SPR or adopted mitigation measure.
- Timing – This column identifies the time frame in which the SPR or mitigation measure will be implemented.
- Implementing Entity – This column identifies the party responsible for implementing the SPR or mitigation measure.
- Verifying/Monitoring Entity – This column identifies the party responsible for verifying and monitoring implementation of the SPR or mitigation measure.

Mitigation Monitoring and Reporting Program

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
STANDARD PROJECT REQUIREMENTS (SPRS)				
Administrative Standard Project Requirements				
SPR AD-3 Consistency with Local Plans, Policies, and Ordinances: The project proponent will design and implement the treatment in a manner that is consistent with applicable local plans (e.g., general plans, Community Wildfire Protection Plans, CAL FIRE Unit Fire Plans), policies, and ordinances to the extent the project is subject to them. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD
SPR AD-9: Obtain a Coastal Development Permit for Proposed Treatment Within the Coastal Zone Where Required. When planning a treatment project within the Coastal Zone, the project proponent will contact the local Coastal Commission district office, or applicable local government to determine if the project area is within the jurisdiction of the Coastal Commission, a local government with a certified Local Coastal Program (LCP), or both. All treatment projects in the Coastal Zone will be reviewed by the local Coastal Commission district office or local government with a certified LCP (in consultation with the local Coastal Commission district office regarding whether a Coastal Development Permit (CDP) is required). If a CDP is required, the treatment project will be designed to meet the following conditions: i. The treatment project will be designed in compliance with applicable provisions of the Coastal Act that provide substantive performance standards for the protection of potentially affected coastal resources, if the treatment activity will occur within the original jurisdiction of the Commission or an area of a local coastal government without a certified LCP; and ii. The treatment project will be designed in compliance with the applicable provisions of the certified LCP, specifically the substantive performance standards for the protection of potentially affected coastal resources, if the treatment activity will occur within the jurisdiction of a local coastal government with a certified LCP. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities. Coastal Act Compliance for this project has been achieved through Coastal Commission approval of the PSA and Coastal VTS.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
Aesthetic and Visual Resource Standard Project Requirements				
SPR AES-2 Avoid Staging within Viewsheds: The project proponent will store all treatment-related materials, including vehicles, vegetation treatment debris, and equipment, outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. The project proponent will also locate materials staging and storage areas outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD
Air Quality Standard Project Requirements				
SPR AQ-1 Comply with Air Quality Regulations: The project proponent will comply with the applicable air quality requirements of air districts within whose jurisdiction the project is located. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD
SPR AQ-4 Minimize Dust: To minimize dust during treatment activities, the project proponent will implement the following measures: ▶ Limit the speed of vehicles and equipment traveling on unpaved areas to 15 miles per hour to reduce fugitive dust emissions, in accordance with the California Air Resources Board (CARB) Fugitive Dust protocol. ▶ If road use creates excessive dust, the project proponent will wet appurtenant, unpaved, dirt roads using water trucks or treat roads with a non-toxic chemical dust suppressant (e.g., emulsion polymers, organic material) during dry, dusty conditions. Any dust suppressant product used will be environmentally benign (i.e., non-toxic to plants and will not negatively impact water quality) and its use will not be prohibited by ARB, EPA, or the State Water Resources Control Board (SWRCB). The project proponent will not over-water exposed areas such that the water results in runoff. The type of dust suppression method will be selected by the project proponent based on soil, traffic, site-specific conditions, and air quality regulations. ▶ Remove visible dust, silt, or mud tracked-out on to public paved roadways where sufficient water supplies and access to water is available. The project proponent will remove dust, silt, and mud from vehicles at the conclusion	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
of each workday, or at a minimum of every 24 hours for continuous treatment activities, in accordance with Vehicle Code Section 23113. ▶ Suspend ground-disturbing treatment activities, including land clearing and bulldozer lines, when there is visible dust transport (particulate pollution) outside the treatment boundary, if the particulate emissions may "cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property," per Health and Safety Code Section 41700. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Archaeological, Historical, and Tribal Cultural Resources Standard Project Requirements				
SPR CUL-1 Conduct Record Search: An archaeological and historical resource record search will be conducted per the applicable state or local agency procedures. Instead of conducting a new search, the project proponent may use recent record searches containing the treatment area requested by a landowner or other public agency in accordance applicable agency guidance. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: N	Prior to all treatment activities. A records search of the treatment area and 0.25-mile buffer surrounding project treatment area has been conducted; see PSA for a summary of the results. Compliance with this SPR is complete.	RCD	RCD
SPR CUL-2 Contact Geographically Affiliated Native American Tribes: The project proponent will obtain the latest Native American Heritage Commission (NAHC) provided Native Americans Contact List. Using the appropriate Native Americans Contact List, the project proponent will notify the California Native American Tribes in the counties where the treatment activity is located. The notification will contain the following: ▶ A written description of the treatment location and boundaries. ▶ Brief narrative of the treatment objectives. ▶ A description of the activities used (e.g., prescribed burning, mastication) and associated acreages. ▶ A map of the treatment area at a sufficient scale to indicate the spatial extent of activities.	Initial Treatment: Y Treatment Maintenance: N	Prior to all treatment activities. Outreach to the NAHC has occurred, Tribes have been contacted, and SLF query completed; see PSA for a summary of consultation and SLF results. Compliance with this SPR is complete.	RCD	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ A request for information regarding potential impacts to cultural resources from the proposed treatment. ▶ A detailed description of the depth of excavation, if ground disturbance is expected. In addition, the project proponent will contact the NAHC for a review of their Sacred Lands File. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR-CUL-3 Pre-field Research: The project proponent will conduct research prior to implementing treatments as part of the cultural resource investigation. The purpose of this research is to properly inform survey design, based on the types of resources likely to be encountered within the treatment area, and to be prepared to interpret, record, and evaluate these findings within the context of local history and prehistory. The qualified archaeologist and/or archaeologically-trained resource professional will review records, study maps, read pertinent ethnographic, archaeological, and historical literature specific to the area being studied, and conduct other tasks to maximize the effectiveness of the survey. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: N	Prior to treatment activities. Pre-field research has occurred by qualified archaeologists and is documented in the 2022 Archaeological Survey Report. Compliance with this SPR is complete.	RCD	RCD
SPR CUL-4 Archaeological Surveys: The project proponent will coordinate with an archaeologically-trained resource professional and/or qualified archaeologist to conduct a site-specific survey of the treatment area. The survey methodology (e.g., pedestrian survey, subsurface investigation) depends on whether the area has a low, moderate, or high sensitivity for resources, which is based on whether the records search, pre-field research, and/or Native American consultation identifies archaeological or historical resources near or within the treatment area. A survey report will be completed for every cultural resource survey completed. The specific requirements will comply with the applicable state or local agency procedures. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: N	Prior to treatment activities. Archaeological surveys were completed for the project January 26 – January 28, 2022 and the results are documented in the 2022 Archaeological Survey Report. Compliance with this SPR is complete.	RCD	RCD
SPR CUL-5 Treatment of Archaeological Resources: If cultural resources are identified within a treatment area, and cannot be avoided, a qualified archaeologist will notify the culturally affiliated tribe(s) based on information provided by NAHC and assess, whether an archaeological find qualifies as a unique archaeological resource, an historical resource, or in coordination with said tribe(s), as a tribal cultural resource. The project proponent, in consultation with culturally affiliated tribe(s), will develop effective protection	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
measures for important cultural resources located within treatment areas. These measures may include adjusting the treatment location or design to entirely avoid cultural resource locations or changing treatment activities so that damaging effects to cultural resources will not occur. These protection measures will be written in clear, enforceable language, and will be included in the survey report in accordance with applicable state or local agency procedures. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR CUL-7 Avoid Built Historical Resources: If the records search identifies built historical resources, as defined in Section 15064.5 of the State CEQA Guidelines, the project proponent will avoid these resources. Within a buffer of 100 feet of the built historical resource, there will be no prescribed burning or mechanical treatment activities Buffers less than 100 feet for built historical resources will only be used after consultation with and receipt of written approval from a qualified archaeologist. If the records search does not identify known historical resources in the treatment area, but structures (i.e., buildings, bridges, roadways) over 50 years old that have not been evaluated for historic significance are present in the treatment area, they will similarly be avoided. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD
SPR CUL-8 Cultural Resource Training: The project proponent will train all crew members and contractors implementing treatment activities on the protection of sensitive archaeological, historical, or tribal cultural resources. Workers will be trained to halt work if archaeological resources are encountered on a treatment site and the treatment method consists of physical disturbance of land surfaces (e.g., soil disturbance). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities.	RCD/GSNCA	RCD
Biological Resources Standard Project Requirements				
SPR BIO-1: Review and Survey Project-Specific Biological Resources. The project proponent will require a qualified RPF or biologist to conduct a data review and reconnaissance-level survey prior to treatment, no more than one year prior to the submittal of the PSA, and no more than one year between completion of the PSA and implementation of the treatment project. The data reviewed will include the biological resources setting, species and sensitive natural communities tables, and habitat information in this PEIR for the	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities. Initial data review and reconnaissance-level survey have been conducted, see PSA for results.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
ecoregion(s) where the treatment will occur. It will also include review of the best available, current data for the area, including vegetation mapping data, species distribution/range information, CNDDB, California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, relevant BIOS queries, and relevant general and regional plans. Reconnaissance-level biological surveys will be general surveys that include visual and auditory inspection for biological resources to help determine the environmental setting of a project site. The qualified surveyor will 1.) identify and document sensitive resources, such as riparian or other sensitive habitats, sensitive natural community, wetlands, or wildlife nursery site or habitat (including bird nests), and 2.) assess the suitability of habitat for special-status plant and animal species. The surveyor will also record any incidental wildlife observations. For each treatment project, habitat assessments will be completed at a time of year that is appropriate for identifying habitat and no more than one year prior to the submittal of the PSA, unless it can be demonstrated in the PSA that habitat assessments older than one year remain valid (e.g., site conditions are unchanged and no treatment activity has occurred since the assessment). If more than one year passes between completion of the PSA and initiation of the treatment project, the project proponent will verify the continued accuracy of the PSA prior to beginning the treatment project by reviewing for any data updates and/or visiting the site to verify conditions. Based on the results of the data review and reconnaissance-level survey, the project proponent, in consultation with a qualified RPF or biologist, will determine which one of the following best characterizes the treatment:				
1. Suitable Habitat Is Present but Adverse Effects Can Be Clearly Avoided. If, based on the data review and reconnaissance-level survey, the qualified RPF or biologist determines that suitable habitat for sensitive biological resources is present but adverse effects on the suitable habitat can clearly be avoided through one of the following methods, the avoidance mechanism will be implemented prior to initiating treatment and will remain in effect throughout the treatment: a. by physically avoiding the suitable habitat, or b. by conducting treatment outside of the season when a sensitive resource could be present within the suitable habitat or outside the season of sensitivity (e.g., outside of special-status bird nesting season,				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
during dormant season of sensitive annual or geophytic plant species, or outside of maternity and rearing season at wildlife nursery sites). Physical avoidance will include flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway) to delineate the boundary of the avoidance area around the suitable habitat. For physical avoidance, a buffer may be implemented as determined necessary by the qualified RPF or biologist. 2. Suitable Habitat is Present and Adverse Effects Cannot Be Clearly Avoided. Further review and surveys will be conducted to determine presence/absence of sensitive biological resources that may be affected, as described in the SPRs below. Further review may include contacting USFWS, NOAA Fisheries, CDFW, CNPS, or local resource agencies as necessary to determine the potential for special-status species or other sensitive biological resources to be affected by the treatment activity. Focused or protocol-level surveys will be conducted as necessary to determine presence/absence. If protocol surveys are conducted, survey procedures will adhere to methodologies approved by resource agencies and the scientific community, such as those that are available on the CDFW webpage at: https://www.wildlife.ca.gov/Conservation/Survey-Protocols. Specific survey requirements are addressed for each resource type in relevant SPRs (e.g., additional survey requirements are presented for special-status plants in SPR BIO-7). This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR BIO-2: Require Biological Resource Training for Workers. The project proponent will require crew members and contractors to receive training from a qualified RPF or biologist prior to beginning a treatment project. The training will describe the appropriate work practices necessary to effectively implement the biological SPRs and mitigation measures and to comply with the applicable environmental laws and regulations. The training will include the identification, relevant life history information, and avoidance of pertinent special-status species; identification and avoidance of sensitive natural communities and habitats with the potential to occur in the treatment area; impact minimization procedures; and reporting requirements. The training will instruct workers when it is appropriate to stop work and allow wildlife encountered during treatment activities to leave the area unharmed and when it is necessary to report encounters to a qualified RPF, biologist, or	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD, CDFW, and USFWS, as appropriate

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
biological technician. The qualified RPF, biologist, or biological technician will immediately contact CDFW or USFWS, as appropriate, if any wildlife protected by the California Endangered Species Act (CESA) or Federal Endangered Species Act (ESA) is encountered and cannot leave the site on its own (without being handled). This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Sensitive Natural Communities and Other Sensitive Habitats				
SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats. If SPR BIO-1 determines that sensitive natural communities or sensitive habitats may be present and adverse effects cannot be avoided, the project proponent will: ▶ require a qualified RPF or biologist to perform a protocol-level survey following the CDFW "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" (current version dated March 20, 2018) of the treatment area prior to the start of treatment activities for sensitive natural communities and sensitive habitats. Sensitive natural communities will be identified using the best means possible, including keying them out using the most current edition of *A Manual of California Vegetation* (including updated natural communities data at http://vegetation.cnps.org/), or referring to relevant reports (e.g., reports found on the VegCAMP website). ▶ map and digitally record, using a Global Positioning System (GPS), the limits of any potential sensitive habitat and sensitive natural community identified in the treatment area. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities.	RCD/GSNCA	RCD
SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub. The project proponent will design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present. An ecological definition of type conversion is used in the CalVTP PEIR for assessment of environmental effects: a change from a vegetation type dominated by native shrub species that are characteristic of chaparral and coastal sage scrub vegetation alliances to a vegetation type characterized predominantly by weedy herbaceous cover or annual grasslands. For the PEIR, type conversion is considered in	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
terms of habitat function, which is defined here as the arrangement and capability of habitat features to provide refuge, food source, and reproduction habitat to plants and animals, and thereby contribute to the conservation of biological and genetic diversity and evolutionary processes (de Groot et al. 2002). Some modification of habitat characteristics may occur provided habitat function is maintained (i.e., the location, essential habitat features, and species supported are not substantially changed). During the reconnaissance-level survey required in SPR BIO-1, a qualified RPF or biologist will identify chaparral and coastal sage scrub vegetation to the alliance level and determine the condition class and fire return interval departure of the chaparral and/or coastal sage scrub present in each treatment area. For all treatment types in chaparral and coastal sage scrub, the project proponent, in consultation with a qualified RPF or qualified biologist will: ▶ Develop a treatment design that avoids environmental effects of type conversion in chaparral and coastal sage scrub vegetation alliances, which will include evaluating and determining the appropriate spatial scale at which the proponent would consider type conversion, and substantiating its appropriateness. The project proponent will demonstrate with substantial evidence that the habitat function of chaparral and coastal sage scrub would be at least maintained within the identified spatial scale at which type conversion is evaluated for the specific treatment project. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, spatial needs of sensitive species, presence of sufficient seed plants and nurse plants, light availability, and edge effects may inform the determination of an appropriate spatial scale. ▶ The treatment design will maintain a minimum percent cover of mature native shrubs within the treatment area to maintain habitat function; the appropriate percent cover will be identified by the project proponent in the development of treatment design and be specific to the vegetation alliances that are present in the identified spatial scale used to evaluate type conversion. Mature native shrubs that are retained will be distributed contiguously or in patches within the stand. If the stand consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity, to the extent needed to avoid type conversion.				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
These SPR requirements apply to all treatment activities and all treatment types, including treatment maintenance. Additional measures will be applied to ecological restoration treatment types: ▶ For ecological restoration treatment types, complete removal of the mature shrub layer will not occur in native chaparral and coastal sage scrub vegetation types. ▶ Ecological restoration treatments will not be implemented in vegetation types that are within their natural fire return interval (i.e., time since last burn is less than the average time listed as the fire return interval range in Table 3.6-1) unless the project proponent demonstrates with substantial evidence that the habitat function of chaparral and coastal sage scrub would be improved. ▶ A minimum of 35 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density (i.e., if baseline shrub canopy density is 60 percent, post treatment shrub canopy density will be no less than 40 percent). A different percent relative cover can be retained if the project proponent demonstrates with substantial evidence that alternative treatment design measures would result in effects on the habitat function of chaparral and coastal sage scrub that are equal or more favorable than those expected to result from application of the above measures. Biological considerations that may inform a deviation from the minimum 35 percent relative cover retention include but are not limited to soil moisture requirements, increased soil temperatures, changes in light/shading, presence of sufficient seed plants and nurse plants, erosion potential, and site hydrology. ▶ If the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity. These SPR requirements apply to all treatment activities and only the ecosystem restoration treatment type, including treatment maintenance. A determination of compliance with the SB 1260 prohibition of type conversion in chaparral and coastal sage scrub is a statutory issue separate from CEQA compliance that may involve factors additional to the ecological definition and habitat functions presented in the PEIR, such as geographic context. It is				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
beyond the legal scope of the PEIR to define SB 1260 type conversion and statutory compliance. The project proponent, acting as lead agency for the proposed later treatment project, will be responsible for defining type conversion in the context of the project and making the finding that type conversion would not occur, as required by SB 1260. The project proponent will determine its criteria for defining and avoiding type conversion and, in making its findings, may draw upon information presented in this PEIR. Project-Specific Implementation Due to the occurrence of the project in the Coastal Zone, and consistent with Coastal Commission guidance, the following project-specific measures are required: ▶ The project proponent will design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present. The definition of type conversion is the conversion from one chaparral or coastal scrub vegetation alliance to another chaparral or coastal scrub vegetation alliance, or a change from a vegetation type dominated by native shrub species that are characteristic of chaparral and coastal sage scrub vegetation alliances to a vegetation type characterized predominantly by weedy herbaceous cover or annual grasslands. The following additional measures are required for ecological restoration treatment types: ▶ For ecological restoration treatment types, complete removal of the mature shrub layer will not occur in native chaparral and coastal sage scrub vegetation types. ▶ Ecological restoration treatments will not be implemented in vegetation types that are within their natural fire return interval (i.e., time since last burn is less than the average time listed as the fire return interval range in Table 3.6-1 in the CalVTP PEIR) unless the project proponent demonstrates with substantial evidence that the habitat function of chaparral and coastal sage scrub would be improved. ▶ A minimum of 50 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density (i.e., if baseline shrub canopy density is 70 percent, post treatment shrub canopy density will be no less than 50 percent). A different percent relative cover				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
can be retained if the project proponent demonstrates with substantial evidence that alternative treatment design measures would result in effects on the habitat function of chaparral and coastal sage scrub that are equal or more favorable than those expected to result from application of the above measures. Biological considerations that may inform a deviation from the minimum 50 percent relative cover retention include but are not limited to soil moisture requirements, increased soil temperatures, changes in light/shading, presence of sufficient seed plants and nurse plants, erosion potential, and site hydrology. ▶ If the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity.				
SPR BIO-6: Prevent Spread of Plant Pathogens. When working in sensitive natural communities, riparian habitats, or oak woodlands that are at risk from plant pathogens (e.g., lone chaparral, blue oak woodland), the project proponent will implement the following best management practices to prevent the spread of *Phytopthora* and other plant pathogens (e.g., pitch canker (*Fusarium*), goldspotted oak borer, shot hole borer, bark beetle): ▶ clean and sanitize vehicles, equipment, tools, footwear, and clothes before arriving at a treatment site and when leaving a contaminated site, or a site in a county where contamination is a risk; ▶ include training on *Phytopthora* diseases and other plant pathogens in the worker awareness training; ▶ minimize soil disturbance as much as possible by limiting the number of vehicles, avoiding off-road travel as much as possible, and limiting use of mechanized equipment; ▶ minimize movement of soil and plant material within the site, especially between areas with high and low risk of contamination; ▶ clean soil and debris from equipment and sanitize hand tools, buckets, gloves, and footwear when moving from high risk to low risk areas or between widely separated portions of a treatment area; and ▶ follow the procedures listed in Guidance for plant pathogen prevention when working at contaminated restoration sites or with rare plants and sensitive habitat (Working Group for *Phytoptheras* in Native Habitats 2016).	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Special-Status Plants				
SPR BIO-7: Survey for Special-Status Plants. If SPR BIO-1 determines that suitable habitat for special-status plant species is present and cannot be avoided, the project proponent will require a qualified RPF or botanist to conduct protocol-level surveys for special-status plant species with the potential to be affected by a treatment prior to initiation of the treatment. The survey will follow the methods in the current version of CDFW's "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities." Surveys to determine the presence or absence of special-status plant species will be conducted in suitable habitat that could be affected by the treatment and timed to coincide with the blooming or other appropriate phenological period of the target species (as determined by a qualified RPF or botanist), or all species in the same genus as the target species will be assumed to be special-status. If potentially occurring special-status plants are listed under CESA or ESA, protocol-level surveys to determine presence/absence of the listed species will be conducted in all circumstances, unless determined otherwise by CDFW or USFWS. For other special-status plants not listed under CESA or ESA, as defined in Section 3.6.1 of this PEIR, surveys will not be required under the following circumstances: ▶ If protocol-level surveys, consisting of at least two survey visits (e.g., early blooming season and later blooming season) during a normal weather year, have been completed in the 5 years before implementation of the treatment project and no special-status plants were found, and no treatment activity has occurred following the protocol-level survey, treatment may proceed without additional plant surveys. ▶ If the target special-status plant species is an herbaceous annual, stump-sprouting, or geophyte species, the treatment may be carried out during the dormant season for that species or when the species has completed its annual lifecycle without conducting presence/absence surveys provided the treatment will not alter habitat or destroy seeds, stumps, or roots, rhizomes, bulbs and other underground parts in a way that would make it unsuitable for the target species to reestablish following treatment.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Environmentally Sensitive Habitat Areas				
SPR BIO-8: Identify and Avoid or Minimize Impacts in Coastal Zone ESHAs. When planning a treatment project within the Coastal Zone, the project proponent will, in consultation with the Coastal Commission or a local government with a certified Local Coastal Program (LCP) (as applicable), identify the habitat types and species present to determine if the area qualifies as an Environmentally Sensitive Habitat Area (ESHA). If the area is an ESHA, the treatment project may be allowed pursuant to this PEIR, if it meets the following conditions. If a project requires a CDP by the Coastal Commission or a local government with a certified LCP (as applicable), the CDP approval may require modification to these conditions to further avoid and minimize impacts: ▶ The treatment will be designed, in compliance with the Coastal Act or LCP if a site is within a certified LCP area, to protect the habitat function of the affected ESHA, protect habitat values, and prevent loss or type conversion of habitat and vegetation types that define the ESHA, or loss of special-status species that inhabit the ESHA. ▶ Treatment actions will be limited to eradication or control of invasive plants, removal of uncharacteristic fuel loads (e.g., removing dead, diseased, or dying vegetation), trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the vegetation types present in the ESHA. ▶ A qualified biologist or RPF familiar with the ecology of the treatment area will monitor all treatment activities in ESHAs. ▶ Appropriate no-disturbance buffers will be developed in compliance with the Coastal Act or relevant LCP policies for treatment activities in the vicinity of ESHAs to avoid adverse direct and indirect effects to ESHAs. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD and California Coastal Commission

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
Invasive Plants and Wildlife				
SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife. The project proponent will take the following actions to prevent the spread of invasive plants, noxious weeds, and invasive wildlife (e.g., New Zealand mudsnail): ▶ clean clothing, footwear, and equipment used during treatments of soil, seeds, vegetative matter, other debris or seed-bearing material, or water (e.g., rivers, streams, creeks, lakes) before entering the treatment area or when leaving an area with infestations of invasive plants, noxious weeds, or invasive wildlife; ▶ for all heavy equipment and vehicles traveling off road, pressure wash, if feasible, or otherwise appropriately decontaminate equipment at a designated weed-cleaning station prior to entering the treatment area from an area with infestations of invasive plants, noxious weeds, or invasive wildlife. Anti-fungal wash agents will be specified if the equipment has been exposed to any pathogen that could affect native species; ▶ inspect all heavy equipment, vehicles, tools, or other treatment-related materials for sand, mud, or other signs that weed seeds or propagules could be present prior to use in the treatment area. If the equipment is not clean, the qualified RPF or biological technician will deny entry to the work areas; ▶ stage equipment in areas free of invasive plant infestations unless there are no uninfested areas present within a reasonable proximity to the treatment area; ▶ identify significant infestations of invasive plant species (i.e., those rated as invasive by Cal-IPC or designated as noxious weeds by California Department of Food and Agriculture) during reconnaissance-level surveys and target them for removal during treatment activities. Treatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles;	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ treat invasive plant biomass onsite to eliminate seeds and propagules and prevent reestablishment or dispose of invasive plant biomass offsite at an appropriate waste collection facility (if not kept on site); transport invasive plant materials in a closed container or bag to prevent the spread of propagules during transport; and ▶ implement Fire and Fuel Management BMPs outlined in the "Preventing the Spread of Invasive Plants: Best Management Practices for Land Mangers" (Cal-IPC 2012, or current version). This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Wildlife				
SPR BIO-10: Survey for Special-Status Wildlife and Nursery Sites. If SPR BIO-1 determines that suitable habitat for special-status wildlife species or nurseries of any wildlife species is present and cannot be avoided, the project proponent will require a qualified RPF or biologist to conduct focused or protocol-level surveys for special-status wildlife species or nursery sites (e.g., bat maternity roosts, deer fawning areas, heron or egret rookeries, monarch overwintering sites) with potential to be directly or indirectly affected by a treatment activity. The survey area will be determined by a qualified RPF or biologist based on the species and habitats and any recommended buffer distances in agency protocols. The qualified RPF or biologist will determine if following an established protocol is required, and the project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate survey protocols. Unless otherwise specified in a protocol, the survey will be conducted no more than 14 days prior to the beginning of treatment activities. Focused or protocol surveys for a special-status species with potential to occur in the treatment area may not be required if presence of the species is assumed. This SPR applies to all treatment activities and treatment types, including treatment maintenance. Project-Specific Implementation ▶ To avoid impacts on special-status salamanders (i.e., California giant salamander, Santa Cruz black salamander), focused surveys (i.e., walk and	Initial Treatment: Y ▶ Special-status salamanders ▶ Cooper's hawk ▶ American badger ▶ Pallid bat ▶ San Francisco dusky footed woodrat Treatment Maintenance: Y ▶ Special-status salamanders ▶ Cooper's hawk ▶ American badger ▶ Pallid bat ▶ San Francisco dusky footed woodrat	No more than 14 days prior to all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
turn surveys) would be conducted within habitat suitable for the species prior to each phase of the project. ▶ For treatment activities that occur during the nesting bird season (February 1–August 31) and to avoid impacts on Cooper's hawk, focused surveys (i.e., nest searches) for nests of these species will be conducted prior to implementing treatment activities during the nesting bird season. ▶ For mechanical treatments and manual treatment activities using power equipment that cannot be avoided during the American badger pupping season and to avoid impacts to American badger focused surveys dens will be conducted prior to implementing treatment activities during the pupping season (February 15 – July 1). ▶ For treatment activities that cannot be avoided during the bat maternity season and to avoid impacts on pallid bat focused surveys for maternity roosts will be conducted prior to implementing treatment activities during the bat maternity season (April 1–August 31). ▶ To avoid impacts on San Francisco dusky-footed woodrats, focused surveys for the species would be conducted within habitat suitable for the species prior to implementation of mechanical and manual treatments using power equipment.				
SPR BIO-12. Protect Common Nesting Birds, Including Raptors. The project proponent will schedule treatment activities to avoid the active nesting season of common native bird species, including raptors, that could be present within or adjacent to the treatment site, if feasible. Common native birds are species not otherwise treated as special status in the CalVTP PEIR. The active nesting season will be defined by the qualified RPF or biologist. If active nesting season avoidance is not feasible, a qualified RPF or biologist will conduct a survey for common nesting birds, including raptors. Existing records (e.g., CNDDB, eBird database, State Wildlife Action Plan) should be reviewed in advance of the survey to identify the common nesting birds, including raptors, that are known to occur in the vicinity of the treatment site. The survey area will encompass reasonably accessible areas of the treatment site and the immediately surrounding vicinity viewable from the treatment site. The survey area will be determined by a qualified RPF or biologist, based on the potential species in the area, location of suitable nesting habitat, and type of treatment. For vegetation removal or project activities that would occur during the nesting season, the survey will be conducted at a time that balances	Initial Treatment: Y Treatment Maintenance: Y	Conduct a survey for common nesting birds (if needed) at a time that balances the effectiveness of detecting nests and the reasonable consideration of potential avoidance strategies (typically, up to 3 weeks before treatment). If an active nest is observed, implement avoidance strategies prior to and during all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
the effectiveness of detecting nests and the reasonable consideration of potential avoidance strategies. Typically, this timeframe would be up to 3 weeks before treatment. The survey will occur in a single survey period of sufficient duration to reasonably detect nesting birds, including raptors, typically one day for most treatment projects (depending on the size, configuration, and vegetation density in the treatment site), and conducted during the active time of day for target species, typically close to dawn and/or dusk. The survey may be conducted concurrently with other biological surveys, if they are required by other SPRs. Survey methods will be tailored by the qualified RPF or biologist to site and habitat conditions, typically involving walking throughout the survey area, visually searching for nests and birds exhibiting behavior that is typical of breeding (e.g., delivering food). If an active nest is observed (i.e., presence of eggs and/or chicks) or determined to likely be present based on nesting bird behavior, the project proponent will implement a feasible strategy to avoid disturbance of active nests, which may include, but is not limited to, one or more of the following: ▶ Establish Buffer. The project proponent will establish a temporary, species-appropriate buffer around the nest sufficient to reasonably expect that breeding would not be disrupted. Treatment activities will be implemented outside of the buffer. The buffer location will be determined by a qualified RPF or biologist. Factors to be considered for determining buffer location will include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and expected treatment activities. Nests of common birds within the buffer need not be monitored during treatment. However, buffers will be maintained until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. ▶ Modify Treatment. The project proponent will modify the treatment in the vicinity of an active nest to avoid disturbance of active nests (e.g., by implementing manual treatment methods, rather than mechanical treatment methods). Treatment modifications will be determined by the project proponent in coordination with the qualified RPF or biologist. ▶ Defer Treatment. The project proponent will defer the timing of treatment in the portion(s) of the treatment site that could disturb the active nest. If this avoidance strategy is implemented, treatment activity will not				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
commence until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. Feasible actions will be taken by the project proponent to avoid loss of common native bird nests. The feasibility of implementing the avoidance strategies will be determined by the project proponent based on whether implementation of this SPR will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. Considerations may include limitations on the presence of environmental and atmospheric conditions necessary to execute treatment prescriptions (e.g., the limited seasonal windows during which prescribed burning can occur when vegetation moisture, weather, wind, and other physical conditions are suitable). If it is infeasible to avoid loss of common bird nests (not including raptor nests), the project proponent will document the reasons implementation of the avoidance strategies is infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). The following avoidance strategies may also be considered together with or in lieu of other actions for implementation by a project proponent to avoid disturbance to raptor nests: ▶ Monitor Active Raptor Nest During Treatment. A qualified RPF, biologist, or biological technician will monitor an active raptor nest during treatment activities to identify signs of agitation, nest defense, or other behaviors that signal disturbance of the active nest is likely (e.g., standing up from a brooding position, flying off the nest). If breeding raptors are showing signs of nest disturbance, one of the other avoidance strategies (establish buffer, modify treatment or defer treatment) will be implemented or a pause in the treatment activity will occur until the disturbance behavior ceases. ▶ Retention of Raptor Nest Trees. Trees with visible nests will be retained, whether or not the nests occupied. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
Project-Specific Implementation Due to the occurrence of the project in the Coastal Zone, and consistent with Coastal Commission guidance, the following project-specific measure is required: ▶ If disturbance to nesting birds cannot be avoided by modifying or delaying treatment, a 300-foot buffer around active nests of non-raptors and a 500-foot buffer around all active raptor nests will be established. These buffers may be modified by a qualified biologist based on vegetative cover, nest height, and topography that would attenuate noise and visual disturbance, as well as species sensitivity. Nest buffers may be reduced to a minimum of 100 feet.				
Geology, Soils, Paleontology, and Mineral Resource Standard Project Requirements				
SPR GEO-1 Suspend Disturbance during Heavy Precipitation: The project proponent will suspend mechanical, prescribed herbivory, and herbicide treatments if the National Weather Service forecast is a "chance" (30 percent or more) of rain within the next 24 hours. Activities that cause mechanical soil disturbance may resume when precipitation stops and soils are no longer saturated (i.e., when soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur). Indicators of saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, or (5) inadequate traction without blading wet soil or surfacing materials. This SPR applies only to mechanical, prescribed herbivory, and herbicide treatment activities and all treatment types, including treatment maintenance. Project-Specific Implementation ▶ To prevent herbicides from being mobilized and soil from being compacted which increases runoff and erosion risk, the project proponent will suspend mechanical and herbicide treatments if: (1) it is raining, (2) soils are saturated, and/or (3) soils are wet enough to mobilize herbicides or be compacted by mechanical activities such that tire tracks are created. The project proponent will be prepared to completely suspend mechanical and herbicide treatment activities prior to the initiation of the rain event.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
Activities that cause mechanical soil disturbance may resume when precipitation stops and soils are no longer very wet or saturated (i.e., when soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur). Indicators of very wet or saturated soil conditions may include, but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, (5) inadequate traction without blading wet soil or surfacing materials, or (6) tire track imprints in the soil. This SPR applies only to mechanical and herbicide treatment activities, and all treatment types, including treatment maintenance. ▶ The project proponent will limit work to outside of the wet season. The wet season starts with the first frontal rain system depositing a minimum of 0.25 inch of rain after October 15 and ends on April 15. Additionally, mechanized and herbicide treatments will be avoided 24 hours after a rain event defined as any precipitation resulting in 0.2 inch or greater throughout the year. Mechanical and herbicide treatments will not occur when soil is saturated or wet.				
SPR GEO-2 Limit High Ground Pressure Vehicles: The project proponent will limit heavy equipment that could cause soil disturbance or compaction to be driven through treatment areas when soils are wet and saturated to avoid compaction and/or damage to soil structure. Saturated soil means that soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur. If use of heavy equipment is required in saturated areas, other measures such as operating on organic debris, using low ground pressure vehicles, or operating on frozen soils/snow covered soils will be implemented to minimize soil compaction. Existing compacted road surfaces are exempted as they are already compacted from use. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD
SPR GEO-3 Stabilize Disturbed Soil Areas: The project proponent will stabilize soil disturbed during mechanical, prescribed herbivory treatments, and prescribed burns that result in exposure of bare soil over 50 percent or more of the treatment area with mulch or equivalent immediately after treatment activities, to the maximum extent practicable, to minimize the potential for substantial sediment discharge. If mechanical, prescribed herbivory, or	Initial Treatment: Y Treatment Maintenance: Y	During mechanical treatment activities that result in exposure of bare soil over 50 percent or more of the treatment area.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
prescribed burn treatment activities could result in substantial sediment discharge from soil disturbed by machinery, animal hooves, or being bare, organic material from mastication or mulch will be incorporated onto at least 75 percent of the disturbed soil surface where the soil erosion hazard is moderate or high, and 50 percent of the disturbed soil surface where soil erosion hazard is low to help prevent erosion. Where slash mulch is used, it will be packed into the ground surface with heavy equipment so that it is sufficiently in contact with the soil surface. This SPR only applies to mechanical, prescribed herbivory, and prescribed burns that result in exposure of bare soil over 50 percent of the project area treatment activities and all treatment types, including treatment maintenance.				
SPR GEO-4 Erosion Monitoring: The project proponent will inspect treatment areas for the proper implementation of erosion control SPRs and mitigations prior to the rainy season. If erosion control measures are not properly implemented, they will be remediated prior to the first rainfall event per SPR GEO-3 and GEO-8. Additionally, the project proponent will inspect for evidence of erosion after the first large storm or rainfall event (i.e., ≥ 1.5 inches in 24 hours) as soon as is feasible after the event. Any area of erosion that will result in substantial sediment discharge will be remediated within 48 hours per the methods stated in SPRs GEO-3 and GEO-8. This SPR applies only to mechanical, prescribed herbivory, and prescribed burning treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during mechanical treatment activities.	RCD/GSNCA	RCD
SPR GEO-5 Drain Stormwater via Water Breaks: The project proponent will drain compacted and/or bare linear treatment areas capable of generating storm runoff via water breaks using the spacing and erosion control guidelines contained in Sections 914.6, 934.6, and 954.6(c) of the California Forest Practice Rules (February 2019 version). Where waterbreaks cannot effectively disperse surface runoff, including where waterbreaks cause surface run-off to be concentrated on downslopes, other erosion controls will be installed as needed to maintain site productivity by minimizing soil loss. This SPR applies only to mechanical, manual, and prescribed burn treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During mechanical treatment activities	RCD/GSNCA	RCD
SPR GEO-7 Minimize Erosion: To minimize erosion, the project proponent will: (1) Prohibit use of heavy equipment where any of the following conditions are present:	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
(i) Slopes steeper than 65 percent. (ii) Slopes steeper than 50 percent where the erosion hazard rating is high or extreme. (iii) Slopes steeper than 50 percent that lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake. (2) On slopes between 50 percent and 65 percent where the erosion hazard rating is moderate, and all slope percentages are for average slope steepness based on sample areas that are 20 acres, or less, heavy equipment will be limited to: (i) Existing tractor roads that do not require reconstruction, or (ii) New tractor roads flagged by the project proponent prior to the treatment activity. (3) Prescribed herbivory treatments will not be used in areas with over 50 percent slope. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.				
SPR GEO-8 Steep Slopes: The project proponent will require a Registered Professional Forester (RPF) or licensed geologist to evaluate treatment areas with slopes greater than 50 percent for unstable areas (areas with potential for landslide) and unstable soils (soil with moderate to high erosion hazard). If unstable areas or soils are identified within the treatment area, are unavoidable, and will be potentially directly or indirectly affected by the treatment, a licensed geologist (P.G. or C.E.G.) will determine the potential for landslide, erosion, of other issue related to unstable soils and identity measures (e.g., those in SPR GEO-7) that will be implemented by the project proponent such that substantial erosion or loss of topsoil would not occur. This SPR applies only to mechanical treatment activities and WUI fuel reduction, non-shaded fuel breaks, and ecological restoration treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to mechancial treatments used to implement ecological restoration treatments on slopes greater than 50 percent.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
Hazardous Materials and Public Health and Safety Standard Project Requirements				
SPR HAZ-1 Maintain All Equipment: The project proponent will maintain all diesel- and gasoline-powered equipment per manufacturer's specifications, and in compliance with all state and federal emissions requirements. Maintenance records will be available for verification. Prior to the start of treatment activities, the project proponent will inspect all equipment for leaks and inspect everyday thereafter until equipment is removed from the site. Any equipment found leaking will be promptly removed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD
SPR HAZ-2 Require Spark Arrestors: The project proponent will require mechanized hand tools to have federal- or state-approved spark arrestors. This SPR applies only to manual treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During manual treatment activities using mechanized hand tools.	RCD/GSNCA	RCD
SPR HAZ-3 Require Fire Extinguishers: The project proponent will require tree cutting crews to carry one fire extinguisher per chainsaw. Each vehicle would be equipped with one long-handled shovel and one axe or Pulaski consistent with PRC Section 4428. This SPR applies only to manual treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During manual treatment activities.	RCD/GSNCA	RCD
SPR HAZ-4 Prohibit Smoking in Vegetated Areas: The project proponent will require that smoking is only permitted in designated smoking areas barren or cleared to mineral soil at least 3 feet in diameter (PRC Section 4423.4). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD
SPR HAZ-5 Spill Prevention and Response Plan: The project proponent or licensed Pest Control Advisor (PCA) will prepare a Spill Prevention and Response Plan (SPRP) prior to beginning any herbicide treatment activities to provide protection to onsite workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants. The SPRP will include (but not be limited to): ▶ a map that delineates staging areas, and storage, loading, and mixing areas for herbicides; ▶ a list of items required in an onsite spill kit that will be maintained throughout the life of the activity;	Initial Treatment: Y Treatment Maintenance: Y	Prepare SPRP prior to herbicide treatments.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ procedures for the proper storage, use, and disposal of any herbicides, adjuvants, or other chemicals used in vegetation treatment. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.				
SPR HAZ-6 Comply with Herbicide Application Regulations: The project proponent will coordinate pesticide use with the applicable County Agricultural Commissioner(s), and all required licenses and permits will be obtained prior to herbicide application. The project proponent will prepare all herbicide applications to do the following: ▶ Be implemented consistent with recommendations prepared annually by a licensed PCA. ▶ Comply with all appropriate laws and regulations pertaining to the use of pesticides and safety standards for employees and the public, as governed by the EPA, DPR, and applicable local jurisdictions. ▶ Adhere to label directions for application rates and methods, storage, transportation, mixing, container disposal, and weather limitations to application such as wind speed, humidity, temperature, and precipitation. ▶ Be applied by an applicator appropriately licensed by the State. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to, during, and following herbicide treatments.	RCD/GSNCA	RCD and Santa Cruz County Agricultural Commissioner
SPR HAZ-7 Triple Rinse Herbicide Containers: The project proponent will triple rinse all herbicide and adjuvant containers with clean water at an approved site, and dispose of rinsate by placing it in the batch tank for application per 3 CCR Section 6684. The project proponent will puncture used containers on the top and bottom to render them unusable, unless said containers are part of a manufacturer's container recycling program, in which case the manufacturer's instructions will be followed. Disposal of non-recyclable containers will be at legal dumpsites. Equipment will not be cleaned, and personnel will not be washed in a manner that would allow contaminated water to directly enter any body of water within the treatment area or adjacent watersheds. Disposal of all herbicides will follow label requirements and waste disposal regulations. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Following herbicide treatments.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
SPR HAZ-8 Minimize Herbicide Drift to Public Areas: The project proponent will employ the following herbicide application parameters during herbicide application to minimize drift into public areas: ▶ application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative); ▶ spray nozzles will be configured to produce the largest appropriate droplet size to minimize drift; ▶ low nozzle pressures (30-70 pounds per square inch) will be utilized to minimize drift; and ▶ spray nozzles will be kept within 24 inches of vegetation during spraying. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During herbicide treatments.	RCD/GSNCA	RCD
Hydrology and Water Quality Standard Project Requirements				
SPR HYD-1 Comply with Water Quality Regulations: Project proponents must also conduct proposed vegetation treatments in conformance with appropriate RWQCB timber, vegetation and land disturbance related Waste Discharge Requirements (WDRs) and/or related Conditional Waivers of Waste Discharge Requirements (Waivers), and appropriate Basin Plan Prohibitions. Where these regulatory requirements differ, the most restrictive will apply. If applicable, this includes compliance with the conditions of general waste discharge requirements (WDR) and waste discharge requirement waivers for timber or silviculture activities where these waivers are designed to apply to non-commercial fuel reduction and forest health projects. In general, WDR and Waivers of waste discharge requirements for fuel reduction and forest health activities require that wastes, including but not limited to petroleum products, soil, silt, sand, clay, rock, felled trees, slash, sawdust, bark, ash, and pesticides must not be discharged to surface waters or placed where it may be carried into surface waters; and that Water Board staff must be allowed reasonable access to the property in order to determine compliance with the waiver conditions. The specifications for each WDR and Waiver vary by region. Regions 2 (San Francisco Bay), 4 (Los Angeles), 8 (Santa Ana), and 7 (Colorado River) are highly urban or minimally forested and do not offer WDRs or Waivers for fuel reduction or vegetation management activities. The current applicable WDRs and Waivers for timber and vegetation management	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
activities are included in Appendix HYD-1. This SPR applies to all treatment activities and treatment types, including treatment maintenance. Project-Specific Implementation Vegetation treatment activities may result in discharges to waters of the state; therefore; compliance with Water Code sections 13260(a)(1) and 13264 are required. Because the Central Coast RWQCB does not have an applicable Regional Water Board Order for disposal of vegetation treatment wastes for this project, the project proponent may use the State Water Board's Vegetation Treatment General Order. The project will be automatically enrolled (through implementation of SPR AD-7) in the State Water Board's Vegetation Treatment General Order, which pertains to projects that prepare a CalVTP PSA or PSA/Addendum. The project's automatic enrollment satisfies the requirements of SPR HYD-1.				
SPR HYD-2 Avoid Construction of New Roads: The project proponent will not construct or reconstruct (i.e., cutting or filling involving less than 50 cubic yards/0.25 linear road miles) any new roads (including temporary roads). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD
SPR HYD-4 Identify and Protect Watercourse and Lake Protection Zones: The project proponent will establish Watercourse and Lake Protection Zones (WLPZs) on either side of watercourses as defined in the table below, which is based on 14 CCR Section 916 .5 of the California Forest Practice Rules (February 2019 version). WLPZ's are classified based on the uses of the stream and the presence of aquatic life. Wider WLPZs are required for steep slopes.	Initial Treatment: Y Treatment Maintenance: Y	Establish WLPZs prior to all treatments; implement WLPZ protections during all treatment activities.	RCD/GSNCA	RCD

Procedures for Determining Watercourse and Lake Protection Zone (WLPZ) widths

Water Class	Class I	Class II	Class III	Class IV
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of	1) Fish always or seasonally present offsite within 1000 feet downstream and/or	No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II	Man-made watercourses, usually downstream, established domestic, agricultural,

Water Class	Class I	Class II	Class III	Class IV
	the operations area and/or 2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.	2) Aquatic habitat for nonfish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.	waters under normal high-water flow conditions after completion of timber operations.	hydroelectric supply or other beneficial use.
WLPZ Width (ft) – Distance from top of bank to the edge of WLPZ				
< 30 % Slope	75	50	Sufficient to prevent the degradation of downstream beneficial uses of water. Determined on a site-specific basis.	
30-50 % Slope	100	75		
>50 % Slope	150	100		

Source: 14 CCR Section 916.5 [936.5, 956.5] (February 2019 version)

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
The following WLPZ protections will be applied for all treatments: ▶ Treatment activities with WLPZs will retain at least 75 percent surface cover and undisturbed area to act as a filter strip for raindrop energy dissipation and for wildlife habitat. If this percentage is reduced a qualified RPF will provide the project proponent with a site- and/or treatment activity-specific explanation for the percent surface cover reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced percent as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). This requirement is based on 14 CCR Section 916.4 [936.4, 956.4] Subsection (b)(6) (February 2019 version) and 14 CCR Section 916.5 (February 2019 version).				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ Equipment, including tractors and vehicles, must not be driven in wet areas or WLPZs, except over existing roads or watercourse crossings where vehicle tires or tracks remain dry. ▶ Equipment used in vegetation removal operations will not be serviced in WLPZs, within wet meadows or other wet areas, or in locations that would allow grease, oil, or fuel to pass into lakes, watercourses, or wet areas. ▶ WLPZs will be kept free of slash, debris, and other material that harm the beneficial uses of water. Accidental deposits will be removed immediately. ▶ Burn piles will be located outside of WLPZs. ▶ No fire ignition (nor use of associated accelerants) will occur within WLPZs however low intensity backing fires may be allowed to enter or spread into WLPZs. ▶ Within Class I and Class II WLPZs, locations where project operations expose a continuous area of mineral soil 800 square feet or larger shall be treated for reduction of soil loss. Treatment shall occur prior to October 15th and disturbances that are created after October 15th shall be treated within 10 days. Stabilization measures shall be selected that will prevent significant movement of soil into water bodies and may include but are not limited to mulching, rip-rap, grass seeding, or chemical soil stabilizers. ▶ Where mineral soil has been exposed by project operations on approaches to watercourse crossings of Class I, II, or III within a WLPZ, the disturbed area shall be stabilized to the extent necessary to prevent the discharge of soil into watercourses or lakes in amounts that would adversely affect the quality and beneficial uses of the watercourse. ▶ Where necessary to protect beneficial uses of water from project operations, protection measures such as seeding, mulching, or replanting shall be used to retain and improve the natural ability of the ground cover within the WLPZ to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes. ▶ Equipment limitation zones (ELZs) will be designated adjacent to Class III and Class IV watercourses with minimum widths of 25 feet where side-slope is less than 30 percent and 50 feet where side-slope is 30 percent or greater. An RPF will describe the limitations of heavy equipment within the ELZ and, where appropriate, will include additional measures to protect the beneficial uses of water.				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR HYD-5 Protect Non-Target Vegetation and Special-status Species from Herbicides: The project proponent will implement the following measures when applying herbicides: ▶ Locate herbicide mixing sites in areas devoid of vegetation and where there is no potential of a spill reaching non-target vegetation or a waterway. ▶ Use only herbicides labeled for use in aquatic environments when working in riparian habitats or other areas where there is a possibility the herbicide could come into direct contact with water. Only hand application of herbicides will be allowed in riparian habitats and only during low-flow periods or when seasonal streams are dry. ▶ No terrestrial or aquatic herbicides will be applied within WLPZs of Class I and II watercourses, if feasible. If this is not feasible, hand application of herbicides labeled for use in aquatic environments may be used within the WLPZ provided that the project proponent notifies the applicable regional water quality control board no fewer than 15 days prior to herbicide application. The feasibility of avoiding herbicide application within WLPZ of Class I and II watercourses will be determined by the project proponent and may be based on whether doing so will preclude achieving CalVTP program objectives, including, but not limited to, protection of vulnerable communities. The reasons for infeasibility will be documented in the PSA. ▶ No herbicides will be applied within a 50-foot buffer of ESA or CESA listed plant species or within 50 feet of dry vernal pools. ▶ For spray applications in and adjacent to habitats suitable for special-status species, use herbicides containing dye (registered for aquatic use by DPR, if warranted) to prevent overspray. ▶ Application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative). ▶ No herbicide will be applied during precipitation events or if precipitation is forecast 24 hours before or after project activities. This SPR applies to herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During herbicide treatments.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
SPR HYD-6 Protect Existing Drainage Systems: If a treatment activity is adjacent to a roadway with stormwater drainage infrastructure, the existing stormwater drainage infrastructure will be marked prior to ground disturbing activities. If a drainage structure or infiltration system is inadvertently disturbed or modified during project activities, the project proponent will coordinate with owner of the system or feature to repair any damage and restore pre-project drainage conditions. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to all treatment activities.	RCD/GSNCA	RCD
Noise Standard Project Requirements				
SPR NOI-1 Limit Heavy Equipment Use to Daytime Hours: The project proponent will require that operation of heavy equipment associated with treatment activities (heavy off-road equipment, tools, and delivery of equipment and materials) will occur during daytime hours if such noise would be audible to receptors (e.g., residential land uses, schools, hospitals, places of worship). Cities and counties in the treatable landscape typically restrict construction-noise (which would apply to vegetation treatment noise) to particular daytime hours. If the project proponent is subject to local noise ordinance, it will adhere to those to the extent the project is subject to them. If the applicable jurisdiction does not have a noise ordinance or policy restricting the time-of-day when noise-generating activity can occur noise-generating vegetation treatment activity will be limited to the hours of 7:00 a.m. to 6:00 p.m., Monday through Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday and federal holidays. If the project proponent is not subject to local ordinances (e.g., CAL FIRE), it will adhere to the restrictions stated above or may elect to adhere to the restrictions identified by the local ordinance encompassing the treatment area. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD
SPR NOI-2 Equipment Maintenance: The project proponent will require that all powered treatment equipment and power tools will be used and maintained according to manufacturer specifications. All diesel- and gasoline-powered treatment equipment will be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. This SPR applies to all activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
SPR NOI-3 Engine Shroud Closure: The project proponent will require that engine shrouds be closed during equipment operation. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all mechanical treatment activites.	RCD/GSNCA	RCD
SPR NOI-4 Locate Staging Areas Away from Noise-Sensitive Land Uses: The project proponent will locate treatment activities, equipment, and equipment staging areas away from nearby noise-sensitive land uses (e.g., residential land uses, schools, hospitals, places of worship), to the extent feasible, to minimize noise exposure. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD
SPR NOI-5 Restrict Equipment Idle Time: The project proponent will require that all motorized equipment be shut down when not in use. Idling of equipment and haul trucks will be limited to 5 minutes. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During all treatment activities.	RCD/GSNCA	RCD
SPR NOI-6 Notify Nearby Off-Site Noise-Sensitive Receptors: For treatment activities utilizing heavy equipment, the project proponent will notify noise-sensitive receptors (e.g., residential land uses, schools, hospitals, places of worship) located within 1,500 feet of the treatment activity. Notification will include anticipated dates and hours during which treatment activities are anticipated to occur and contact information, including a daytime telephone number, of the project representative. Recommendations to assist noise-sensitive land uses in reducing interior noise levels (e.g., closing windows and doors) will also be included in the notification. This SPR applies only to mechanical treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to mechanical treatment activities occurring within 1,500 feet of noise-sensitive receptors.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
MITIGATION MEASURES				
Air Quality				
Mitigation Measure AQ-1: Implement On-Road Vehicle and Off-Road Equipment Exhaust Emission Reduction Techniques Where feasible, project proponents will implement emission reduction techniques to reduce exhaust emissions from off-road equipment. It is acknowledged that due to cost, availability, and the limits of current technology, there may be circumstances where implementation of certain emission reduction techniques will not feasible. The project proponent will document the emission reduction techniques that will be applied and will explain the reasons other techniques that could reduce emissions are infeasible. Techniques for reducing emissions may include, but are not limited to, the following: ▶ Diesel-powered off-road equipment used in construction will meet EPA's Tier 4 emission standards as defined in 40 CFR 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. Tier 3 models can be used if a Tier 4 version of the equipment type is not yet produced by manufacturers. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. Prior to implementation of treatment activities, the project proponent will demonstrate the ability to supply the compliant equipment. A copy of each unit's certified tier specification or model year specification and operating permit (if applicable) will be available upon request at the time of mobilization of each unit of equipment. ▶ Use renewable diesel fuel in diesel-powered construction equipment. Renewable diesel fuel must meet the following criteria: ▪ meet California's Low Carbon Fuel Standards and be certified by CARB Executive Officer; ▪ be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., non-petroleum sources), such as animal fats and vegetables; ▪ contain no fatty acids or functionalized fatty acid esters; and ▪ have a chemical structure that is identical to petroleum-based diesel and complies with American Society for Testing and Materials D975	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities (where feasible).	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
requirements for diesel fuels to ensure compatibility with all existing diesel engines. ▶ Electric- and gasoline-powered equipment will be substituted for diesel-powered equipment. ▶ Workers will be encouraged to carpool to work sites, and/or use public transportation for their commutes. ▶ Off-road equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NO_X and PM.				
Archaeological, Historical, and Tribal Cultural Resources				
Mitigation Measure CUL-2: Protect Inadvertent Discoveries of Unique Archaeological Resources or Subsurface Historical Resources If any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, are discovered during ground-disturbing activities, all ground-disturbing activity within 100 feet of the resources will be halted and a qualified archaeologist will assess the significance of the find. The qualified archaeologist will work with the project proponent to develop a primary records report that will comply with applicable state or local agency procedures. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan will be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find constitutes a unique archaeological resource, subsurface historical resource, or tribal cultural resource), the archaeologist will work with the project proponent to develop appropriate procedures to protect the integrity of the resource. Procedures could include preservation in place (which is the preferred manner of mitigating impacts to archaeological sites), archival research, subsurface testing, or recovery of scientifically consequential information from and about the resource. Any find will be recorded standard DPR Primary Record forms (Form DPR 523) will be submitted to the appropriate regional information center. Project-Specific Implementation Pursuant to Project Standard 4 in the PWP, the distance for required cessation of development activities shall be controlled by Section 16.40.040 of the County's Code. Specifically, any property owner who, at any time in the preparation for or process of excavating or otherwise disturbing the ground, discovers any human remains of any age, or any	Initial Treatment: Y Treatment Maintenance: Y	During all ground-disturbing treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age, shall cease and desist from all further excavations and disturbances within 200 feet of the discovery.				
Biological Resources				
Mitigation Measure BIO-1a: Avoid Loss of Special-Status Plants Listed under ESA or CESA If listed plants are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will avoid and protect these species by establishing a no-disturbance buffer around the area occupied by listed plants and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway), exceptions to this requirement are listed later in this measure. The no-disturbance buffers will generally be a minimum of 50 feet from listed plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid killing or damaging listed plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate buffer size will be determined based on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. For example, paint-on or wicking application of herbicides to invasive plants may be implemented within 50 feet of listed plant species without posing a risk, especially if the listed plants are dormant at the time of application. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform the determination of buffer width. If a no-disturbance buffer is reduced below 50 feet from a listed plant, a qualified RPF or botanist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report) with a science-based justification for the deviation. No fire ignition (and associated use of accelerants) will occur within 50 feet of listed plants.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
For species listed under ESA or CESA, if the project proponent cannot avoid loss by implementing no-disturbance buffers, the project proponent will implement Mitigation Measure BIO-1c. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist, in consultation with CDFW and USFWS, as appropriate depending on species status and location, that the listed plants would benefit from treatment in the occupied habitat area even though some of the listed plants may be lost during treatment activities. For a treatment to be considered beneficial to listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to listed plants, no compensatory mitigation for loss of individuals will be required.				
Mitigation Measure BIO-1b: Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA If non-listed special-status plant species (i.e., species not listed under ESA or CESA, but meeting the definition of special-status as stated in Section 3.6.1 of the Program EIR) are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will implement the following measures to avoid loss of individuals and maintain habitat function of occupied habitat: ▶ Physically avoid the area occupied by the special-status plants by establishing a no-disturbance buffer around the area occupied by species and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The no-disturbance buffers will generally be a minimum of 50 feet from special-status plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid loss of or damaging to special-status plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate size and shape of the buffer zone will be determined by a qualified RPF or botanist and will depend on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during all treatment activities.	RCD/GSNCA	RCD

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform an appropriate buffer size and shape. ▶ Treatments may be conducted within this buffer if the potentially affected special-status plant species is a geophytic, stump-sprouting, or annual species, and the treatment can be conducted outside of the growing season (e.g., after it has completed its annual life cycle) or during the dormant season using only treatment activities that would not damage the stump, root system or other underground parts of special-status plants or destroy the seedbank. ▶ Treatments will be designed to maintain the function of special-status plant habitat. For example, for a fuel break proposed in treatment areas occupied by special-status plants, if the removal of shade cover would degrade the special-status plant habitat despite the requirement to physically or seasonally avoid the special-status plant itself, habitat function would be diminished and the treatment would need to be modified or precluded from implementation. ▶ No fire ignition (and associated use of accelerants) will occur within the special-status plant buffer. A qualified RPF or botanist with knowledge of the special-status plant species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment would not maintain habitat function of the special-status plant habitat (i.e., the habitat would be rendered unsuitable) or because the loss of special-status plants would substantially reduce the number or restrict the range of a special-status plant species. If the project proponent determines the impact on special-status plants would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status plants or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-1c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
would benefit from treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required.				
Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities) If California Fully Protected Species or species listed under ESA or CESA are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid adverse effects to the species by implementing the following. <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> The project proponent will implement one of the following 2 measures to avoid mortality, injury, or disturbance of individuals: 1. Treatment will not be implemented within the occupied habitat. Any treatment activities outside occupied habitat will be a sufficient distance from the occupied habitat such that mortality, injury, or disturbance of the species will not occur, as determined by a qualified RPF or biologist using the most current and commonly-accepted science and considering published agency guidance; OR 2. Treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, CDFW and/or USFWS/NOAA Fisheries will be consulted to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species.	Initial Treatment: Y ▶ California red-legged frog ▶ Ringtail Treatment Maintenance: Y ▶ California red-legged frog ▶ Ringtail	Prior to and during all treatment activities.	RCD/GSNCA	RCD, CDFW, and/or USFWS/NOAA Fisheries

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ For species listed under ESA or CESA, if the project proponent cannot avoid mortality, injury or disturbance by implementing one of the two options listed above, the project proponent will implement Mitigation Measure BIO-2c. ▶ Injury or mortality of California Fully Protected Species is prohibited pursuant to Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code and will be avoided.				
<u>Maintain Habitat Function</u> ▶ The project proponent will design treatment activities to maintain the habitat function, by implementing the following: ■ While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; dens; tree snags; large raptor nests [including inactive nests]; downed woody debris; food sources). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. ■ If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that listed or fully protected wildlife with specific requirements for high canopy cover (e.g., Humboldt marten, fisher, spotted owl, coastal California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained. ▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c. Project-Specific Implementation ▶ To avoid mortality, injury, or disturbance to California red-legged frog, pre-treatment surveys will be conducted. ▪ Each week, a pretreatment survey for California red-legged frog will be conducted within the following week's treatment areas by a qualified biologist familiar with the California red-legged frog and its microhabitats to ensure frogs are not present. The qualified biologist will mark areas where frogs are found or likely to occur. ▪ Daily inspection of the day's treatment area will be performed by the qualified biologist, qualified RPF, or supervised trained designee. Prior to implementation of daily inspections, the qualified biologist will conduct a training for other project staff (i.e., qualified RPF or supervised trained designee). The training will include: identification of California red-legged frog, procedures to follow for daily inspection of appropriate habitat features immediately before treatment occurs, and proper procedures to implement if a frog is present (e.g., establish a no-disturbance buffer zone of a size that will appropriately avoid California red-legged frog where treatment will not occur until the frog has left the area, halt activities if a California red-legged frog is observed during treatment, allow California red-legged frogs to move out of the treatment area on their own accord, notify USFWS if California red-legged frogs are observed). ▶ To avoid mortality or injury to ringtail the following will be implemented when mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws) are implemented during the maternity season (April 15–June 30). ▪ Within 7 days prior to the start of mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws) during the ringtail maternity season, a qualified RPF or biologist will conduct a den search in the treatment area to be treated the next week. The qualified RPF or biologist will search for large trees (i.e., greater than 12 inches dbh) with appropriate cavities (i.e., holes larger than 3 inches in diameter, cavities extending				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
approximately 12 inches down from the cavity hole). If found, the qualified RPF will inspect the cavity using a cell phone with a flash, or other tools (e.g., borescopes) to determine whether ringtails are present. Areas (e.g., large trees) with appropriate den habitat, occupied or not, will be marked (i.e., with flagging, spray paint), for inspection during future sweeps (as described below). The qualified RPF or biologist will also search for dens in dense brush habitat and will note any sightings of fleeing adult ringtails. ▪ If active ringtail dens are discovered during a den survey or daily sweep, a no-disturbance buffer of at least 0.25 mile will be implemented around the den, and mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws) will not proceed within the buffer until at least the end of the ringtail maternity season (June 30). The qualified RPF or biologist will confirm that the den is unoccupied before treatment activities resume. The 0.25-mile buffer would incorporate the den and an area greater than the typical ringtail home range in northern California (Wyatt, pers. comm., 2021). If an active den is discovered, CDFW will be notified of the den and buffer location. CDFW will be provided an opportunity to visit the site and provide technical information on the size and shape of the den buffer. ▪ If active ringtail dens are not discovered, the following measures will be implemented to avoid inadvertent destruction of active dens that eluded detection during the den search as well as injury or mortality of adult ringtails and kits. On the first morning of work for mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws), a qualified RPF or biologist will conduct a sweep of the area to be treated that week and will search all habitat suitable for ringtails where mastication or tree removal will occur that day (i.e., larger trees, heavy brush, rock piles) for active dens or adults, including the trees with cavities previously marked by the qualified RPF or biologist. On following days, a trained contractor will search all areas previously marked by the qualified RPF or biologist for active dens. If an active den is discovered during a daily sweep, the qualified RPF or biologist will be notified, all work will stop, a no-disturbance buffer of at least 0.25 mile will be implemented				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
around the den, and the requirements described above under "Active Dens" will be followed.				
Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) If other special-status wildlife species (i.e., species not listed under CESA or ESA or California Fully Protected, but meeting the definition of special status as stated in Section 3.6.1 of the Program EIR) are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid or minimize adverse effects to the species by implementing the following. <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> ▶ The project proponent will implement the following to avoid mortality, injury, or disturbance of individuals: For all treatment activities except prescribed burning, the project proponent will establish a no-disturbance buffer around occupied sites (e.g., nests, dens, roosts, middens, burrows, nurseries). Buffer size will be determined by a qualified RPF or biologist using the most current, commonly accepted science and will consider published agency guidance; however, buffers will generally be a minimum of 100 feet, unless site conditions indicate a smaller buffer would be sufficient for protection or a larger buffer would be needed. Factors to be considered in determining buffer size will include, but not be limited to, the species' tolerance to disturbance; the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; baseline levels of noise and human activity; and treatment activity. Buffer size may be adjusted if the qualified RPF or biologist determines that such an adjustment would not be likely to adversely affect (i.e., cause mortality, injury, or disturbance to) the species within the nest, den, burrow, or other occupied site. If a no-disturbance buffer is reduced below 100 feet from an occupied site, a qualified RPF or biologist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the	Initial Treatment: Y ▶ Special-status salamanders ▶ Cooper's hawk ▶ American badger ▶ Pallid bat ▶ San Francisco dusky footed woodrat Treatment Maintenance: Y ▶ Special-status salamanders ▶ Cooper's hawk ▶ American badger ▶ Pallid bat ▶ San Francisco dusky footed woodrat	Prior to and during all treatment activities.	RCD/GSNCA	RCD and CDFW

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). ▪ No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified RPF or biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified RPF, biologist, or biological technician will be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in mortality, injury or disturbance to special-status species. ▪ For prescribed burning, the project proponent will implement the treatment outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, the qualified RPF or biologist will determine the period of time within which prescribed burning could occur that will avoid or minimize mortality, injury, or disturbance of the species. The project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate limited operating periods. <u>Maintain Habitat Function</u> ▶ For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following: ▪ While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and				

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

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
area even though some of the non-listed special-status wildlife may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to non-listed special-status wildlife, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status wildlife, no compensatory mitigation will be required. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding the determination that a non-listed special-status species would benefit from the treatment. Project-Specific Implementation ▶ If special-status salamanders (i.e., California giant salamander, Santa Cruz black salamander) are detected during focused surveys, biological monitoring by a qualified biologist during treatment activities within or adjacent to sensitive habitat areas (e.g., streams, seeps, springs, talus slopes) will be implemented to avoid injury to or mortality of individual salamanders. If the qualified biologist detects a special-status salamander during treatments, treatment activities will cease until the salamander has left the area or has been moved out of harm's way and to other nearby habitat suitable for the species by the qualified biologist. ▶ If a Cooper's hawk nest is detected during focused surveys, a no-disturbance buffer of at least 500 feet will be established around the nest, and no treatment activities will occur within this buffer until the chicks have fledged as determined by a qualified RPF or biologist. Trees with visible nests will be retained, whether or not the nests occupied. ▶ If a pallid bat roost is detected during focused surveys, a no-disturbance buffer of 250 feet will be established around the roost, and no treatment activities will occur within this buffer until the roost is no longer being used as determined by a qualified RPF or biologist. ▶ If an American badger den is detected within treatment areas during focused surveys, a no-disturbance buffer of 100 feet would be established around active maternity dens, and treatments would not occur within this buffer during the pupping season (February 15 – July 1).				

Standard Project Requirements and Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ If woodrat nests are detected within treatment areas during focused surveys, a no-disturbance buffer of 100 feet would be established around the nests during the breeding season (April through mid-July) to prevent accidental encroachment by vehicles, equipment, or personnel. If woodrat nests within treatment areas cannot be avoided, a qualified biologist will implement nest relocation procedures outside of the woodrat breeding season. The biologist would determine whether the nest is active through live-trapping, dismantle the woodrat nest by hand, and rebuild the nest outside of the treatment footprint.				
Hazardous Materials, Public Health and Safety				
Mitigation Measure HAZ-3: Identify and Avoid Known Hazardous Waste Sites Prior to the start of vegetation treatment activities requiring soil disturbance (i.e., mechanical treatments) or prescribed burning, CAL FIRE and other project proponents will make reasonable efforts to check with the landowner or other entity with jurisdiction (e.g., California Department of Parks and Recreation) to determine if there are any sites known to have previously used, stored, or disposed of hazardous materials. If it is determined that hazardous materials sites could be located within the boundary of a treatment site, the project proponent will conduct a DTSC EnviroStor web search (https://www.envirostor.dtsc.ca.gov/public/) and consult DTSC's Cortese List to identify any known contamination sites within the project site. If a proposed mechanical treatment or prescribed burn is located on a site included on the DTSC Cortese List as containing potential soil contamination that has not been cleaned up and deemed closed by DTSC, the area will be marked and no prescribed burning or soil disturbing treatment activities will occur within 100 feet of the site boundaries. If it is determined through coordination with landowners or after review of the Cortese List that no potential or known contamination is located on a project site, the project may proceed as planned.	Initial Treatment: Y Treatment Maintenance: N	Prior to initial treatment activities. Database searches are complete; there are no known hazardous waste sites in the treatment area. See results in PSA.	RCD	RCD

Appendix B

Special-Status Species Tables

Introduction and Methods

The species tables contained in this appendix present special-status botanical and wildlife species that are known to occur in the Skylark Ranch Forest Health Project (project) region, and includes their potential to occur in the project treatment area. The species tables were developed through a review of relevant databases, and other available information. Specifically, the California Native plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2021) and CDFW's California Natural Diversity Database (CNDDB) (CNDDB 2021) were reviewed for specific information on documented observations of special-status species previously recorded in the treatment area and vicinity. A search of the CNDDB and CNPS was conducted for the following U.S. Geological Survey 7.5' quadrangles surrounding the treatment area: Davenport, Big Basin, Mindego Hill, San Gregorio, La Honda, Franklin Point, Ano Nuevo, and Pigeon Point. In addition, a review was conducted of Exhibit C of the Santa Cruz County Forest Health and Fire Resilience Public Works Plan (PWP), and Appendix BIO-3 (Table 1a, Table 1b, and Table 19) in the PEIR (Volume II) for special-status plants and wildlife that could occur in the Central California Coast ecoregion.

Table B-1 Special-Status Botanical Species Known to Occur in the Project Region and their Potential for Occurrence in the Treatment Area During Initial and Maintenance Treatments

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Awned bent grass *Agrostis aristiglumis* (*A. microphylla*)	-	-	LCP	Valley grassland, wetland-riparian, common in many plant communities, usually in wetlands (Calflora 2021a). Elevation 0 – 1,680 feet. Blooms May – July.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable habitat is present in the treatment area.
Blasdale's bent grass *Agrostis blasdalei*	-	-	LCP CRPR 1B.2	Coastal dunes, coastal bluff scrub, coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 15–1,200 feet in elevation. Blooms May–July.	Not Expected to Occur: The treatment area does not include coastal dunes, coastal bluff scrub, or coastal prairie habitat required for the species.
Bent-flowered fiddleneck *Amsinckia lunaris*	-	-	LCP CRPR 1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 10–2,600 feet in elevation. Blooms March–June.	Not Expected to Occur: The treatment area does not include woodland, grassland or coastal bluff scrub habitat required for the species.
Coast rock cress *Arabis blepharophylia*	-	-	LCP CRPR 4.3	Broad-leafed upland forest, coastal prairie, coastal scrub, coastal bluff scrub. Rocky sites. 10–3,600 feet in elevation. Blooms February–May.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan and is documented to occur in the project region (CNPS 2021). However, suitable broad-leafed upland forest, coastal prairie, coastal scrub, coastal bluff scrub does not occur within the treatment area.
Anderson's manzanita *Arctostaphylos andersonii*	-	-	CRPR 1B.2	Broad-leafed upland forest, chaparral, north coast coniferous forest. Open sites, redwood forest. 200–2,500 feet in elevation. Blooms November–May.	Could Occur: The treatment area contains forested and chaparral habitat that may be suitable for this species.
Schreiber's manzanita *Arctostaphylos glutinosa*	-	-	LCP CRPR 1B.2	Closed-cone coniferous forest, chaparral. Mudstone or diatomaceous shale outcrops; often with *Pinus attenuata*. 560–2,250 feet in elevation. Blooms as early as November in some locations, generally March–April.	Could Occur: The treatment area contains forested and chaparral habitat and soils that may be suitable for this species.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Hooker's manzanita Arctostaphylos hookeri spp. hookeri	_	_	LCP CRPR 1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub. Sandy soils. 195 -1,760 feet in elevation. Blooms January – June.	Not Expected to Occur: The treatment area contains suitable habitat for the species; however, the species is not known to occur north of Aptos, and the treatment area is therefore outside of the species range.
Ohlone manzanita *Arctostaphylos ohloneana*	-	-	CRPR 1B.1	Coastal scrub, closed cone coniferous forests. Monterey shale. 1,480–1,740 feet in elevation. Blooms February–March.	Not Expected to Occur: The treatment area does contain closed cone forest; however, the treatment area does not contain Monterey shale soils and is substantially below the elevational range of the species.
Parajo manzanita *Arctostaphylos pajaroensis*	-	-	LCP CRPR 1B.1	Chaparral. Sandy soils. 100–500 feet in elevation. Blooms December–March.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021).
Kings Mountain manzanita *Arctostaphylos regismontana*	-	-	CRPR 1B.2	Broad-leafed upland forest, chaparral, north coast coniferous forest. Granitic or sandstone outcrops. 790–2.310 feet in elevation. Blooms December–April.	Could Occur: The treatment area does contain forest and chaparral habitat suitable for this species, and the treatment area is on the southern end of the geographic range of the species.
Bonny Doon manzanita *Arctostaphylos silvícola*	-	-	LCP CRPR 1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest. Only known from Zayante (inland marine) sands in Santa Cruz County. 500–1,700 feet in elevation. Blooms January–March.	Not Expected to Occur: The treatment area does not contain the Zayante sand habitat suitable for this species.
Marsh sandwort *Arenaria paludicola*	FE	SE	LCP CRPR 1B.1	Wetland. Marshes and swamps. Growing up through dense mats of Typha, Juncus, Scirpus, etc. in freshwater marsh. Sandy soil. 10–560 feet in elevation. Blooms May–August.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021). The treatment area does not contain marsh and swamp habitat suitable for this species.
Coastal marsh milk-vetch *Astragalus pycnostachyus* var. *pycnostachyus*	-	-	CRPR 1B.2	Wetland. Coastal dunes, marshes and swamps, coastal scrub. Mesic sites in dunes or along streams or coastal salt marshes. 0–510 feet in elevation. Blooms April–October.	Not Expected to Occur: The treatment area does not contain suitable wetland within coastal dunes or coastal scrub habitat for this species.
Santa Cruz Mountains pussypaws *Calyptridium parryi* var. *hesseae*	-	-	LCP CRPR 1B.1	Chaparral, cismontane woodland. Sandy or gravelly openings. 980–5,040 feet in elevation. Blooms May–August.	Could Occur: The treatment area contains chaparral habitat suitable for this species.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Swamp harebell *Campanula californica*	-	-	LCP CRPR 1B.2	Wetland. Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marsh, north coast coniferous forest. Bogs and marshes in a variety of habitats; uncommon where it occurs. 5–1,330 feet in elevation. Blooms June–October.	Not expected to occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the treatment area does not contain seep, bog, or marsh habitat suitable for this species.
Chaparral harebell *Campanula exigua*	-	-	LCP CRPR 1B.2	Chaparral. Rocky sites, usually on serpentine in chaparral. 900–4,100 feet in elevation. Blooms May–June.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021). The treatment area does not contain suitable serpentine habitat for this species
Bristly sedge *Carex comosa*	-	-	CRPR 2B.1	Wetland. Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -16–5315 feet in elevation. Blooms May–September.	Not Expected to Occur: The treatment area does not contain suitable wetland habitat for this species.
Monterey paintbrush *Castilleja latifola*	-	-	LCP	Coastal Strand, northern coastal scrub. 0 – 1,800 feet. Blooms February – September.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable habitat for this species is present within the treatment area.
Monterey ceanothus *Ceanothys rigidus*	-	-	LCP CRPR 4.2	Closed-cone coniferous forest, coastal scrub, chaparral. Sandy hills, flats. 10–1,800 feet in elevation. Blooms February–April and as late as June in some conditions.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021). Closed-cone coniferous forest and chaparral habitat suitable for this species is present within the treatment area.
Ben Lomond spineflower *Chorizanthe pungens* var. *hartwegiana*	FE	-	LCP CRPR 1B.1	Lower montane coniferous forest. Zayante coarse sands in maritime ponderosa pine sandhills. 340–1,560 feet in elevation. Blooms April–July.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the treatment area does not contain the Zayante sand habitat suitable for this species.
Monterey spineflower *Chorizanthe pungens var. pungens*	FT	-	LCP CRPR 1B.2	Coastal dunes, chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Sandy soils in coastal dunes or more inland within chaparral or other habitats. 0–560 feet in elevation. Blooms April–June and as late as July or August in some conditions.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021).

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Scotts Valley spineflower (Hartweg's spineflower) *Chorizanthe robusta* var. *hartwegii*	FE	-	CRPR 1B.1	Meadows, valley and foothill grassland. In grasslands with mudstone and sandstone outcrops. 340–800 feet in elevation. Blooms April–July.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021). The treatment area does not contain the meadow or grassland habitat suitable for this species.
Robust spineflower *Chorizanthe robusta* var. *robusta*	FE	-	LCP CRPR 1B.1	Cismontane woodland, coastal dunes, coastal scrub, chaparral. Sandy terraces and bluffs or in loose sand. 30–804 feet in elevation. Blooms April–September.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021).
Franciscan thistle *Cirsium andrewsii*	-	-	CRPR 1B.2	Coastal bluff scrub, broad-leafed upland forest, coastal scrub, coastal prairie. Sometimes serpentine seeps. 0–490 feet in elevation. Blooms March–July.	Not Expected to Occur: The treatment area does contain stands of broad-leafed upland forest; however, serpentine soils are not present (NRCS 2021).
San Francisco collinsia *Collinsia multicolor*	-	-	LCP CRPR 1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 98–820 feet in elevation. Blooms as early as February; however generally blooms March–May.	Could Occur: The treatment area contains closed-cone coniferous forested habitat and shale derived soils that may be suitable for this species.
Clustered lady's slipper *Cpriapedium fasciculatum*	-	-	LCP CRPR 4.2	Ultramafic, wetland. North Coast coniferous forest, lower montane coniferous forest. In serpentine seeps and moist streambanks. 330–7,990 feet in elevation. Blooms March–August.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021). Suitable serpentine habitat is not present within the treatment area.
Western leatherwood *Dirca occidentalis*	-	-	CRPR 1B.2	Broad-leafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland. On brushy slopes, mesic sites; mostly in mixed evergreen and foothill woodland communities. 80–1,390 feet in elevation. Blooms January–March, and as late as April in some conditions.	Could Occur: The treatment area contains chaparral and closed-cone coniferous forest habitat suitable for this species.
California bottle brush grass *Elymus californicus*	-	-	LCP CRPR 4.3	North Coast coniferous forest, cismontane woodland, broad-leafed upland forest, riparian woodland. In sandy humus soils. 50–1,540 feet in elevation. Blooms May–August and as late as November in some conditions.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area contains coniferous forest habitat suitable for this species.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Ben Lomond buckwheat *Eriogonum nudum* var. *decurrens*	-	-	CRPR 1B.1	Chaparral, cismontane woodland, lower montane coniferous forest. Ponderosa pine sandhills in Santa Cruz County. 160–2,625 feet in elevation. Blooms June–October.	Not Expected to Occur: The treatment area does not occur in the ponderosa pine sandhill habitat required for this species.
San Mateo woolly sunflower *Eriophyllum latilobum*	FE	SE	CRPR 1B.1	Cismontane woodland, coastal scrub, lower montane coniferous forest. Often on roadcuts; found on and off of serpentine. 100–2,000 feet in elevation. Blooms May–June.	Not Expected to Occur: The treatment area contains coniferous forest habitat that may be suitable for this species; however, the species is restricted to areas of San Mateo County north of Pescadero (Calflora 2021b).
Sand-loving (Coast) wallflower *Erysimum ammophilum*			LCP CRPR 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 0–200 feet in elevation. Blooms February–June.	Could Occur: The treatment area contains chaparral/coastal scrub habitat suitable for this species.
San Francisco wallflower *Erysimum franciscanum*			LCP CRPR 4.2	Chaparral, coastal dunes, coastal scrub, and valley and foothill grassland. Often on serpentinite or granitic substrates, sometimes found on roadsides.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area contains chaparral/coastal scrub habitat suitable for this species.
Santa Cruz wallflower *Erysimum teretifolium*	FE	SE	LCP CRPR 1B.1	Lower montane coniferous forest, chaparral. Inland marine sands (Zayante coarse sand). 591–1690 feet in elevation. Blooms March–July.	Not Expected to Occur: The treatment area does not contain the Zayante sand habitat suitable for this species.
Minute pocket moss *Fissidens pauperculus*	-	-	CRPR 1B.2	Redwood. North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and stream banks. 30–3,360 feet in elevation.	Not Expected to Occur: The treatment area contains coniferous forest habitat; however, no stream habitat required for this species is present.
Fragrant fritillary *Fritillaria liliacea*	_	_	CRPR 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentine; various soils reported though usually on clay, in grassland. 10–1,310 feet in elevation. Blooms February–April.	Could Occur: The treatment area contains chaparral/costal scrub habitat suitable for this species.
Zayante everlasating *Gnaphalium zayanteese*	-	-	LCP	Undescribed species from Zayante sand hills habitat.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable sand hills habitat is not present in the treatment area.
Toren's grimmia *Grimmia torenii*	-	-	CRPR 1B.3	Cismontane woodland, lower montane coniferous forest, chaparral. Rocky openings, , boulder and rock walls, carbonate, volcanic. 1,070–3,800 feet in elevation.	Not Expected to Occur: The treatment area does contain chaparral habitat; however, no boulders, or rock walls of carbonate or volcanic rock are present.
Vaginulate grimmia *Grimmia vaginulata*	-	-	CRPR 1B.1	Limestone. Chaparral. Rocky openings; boulder and rock walls, carbonate. 2247–3724 feet in elevation.	Not Expected to Occur: The treatment area contains chaparral habitat; however, no boulders, or rock walls of limestone/carbonate are present.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Coastal gumplant *Grindelia latifolia latifolia* (*G. stricta* var. platyphylla	-	-	LCP	Coastal Strand, Coastal Salt Marsh, Coastal Sage Scrub, wetland-riparian near coast. 0- 1,050 feet. Blooms May – October.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable wetland habitat may be present within the treatment area.
Short-leaved evax *Hesperevax sparsiflora* var. *brevifolia*	-	-	CRPR 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. 0–705 feet in elevation. Blooms March–June.	Not Expected to Occur: The treatment area does not contain coastal bluff scrub, coastal dunes, or coastal prairie habitat suitable for this species.
Santa Cruz cypress *Hesperocyparis abramsiana* var. *abramsiana*	FT	SE	CRPR 1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest. Restricted to the Santa Cruz Mountains, on sandstone and granitic-derived soils; often w/*Pinus attenuata*, redwoods. 980–3,560 feet in elevation.	Not Expected to Occur: The treatment area contains habitat and soils suitable for this species; however, this subspecies is confined to stands located on Major's Creek, near Eagle Rock, Boulder Creek Canyon, and Bonny Doon (Lanner 1999). Therefore, the treatment area is outside of the range of this species.
Butano Ridge cypress *Hesperocyparis abramsiana* var. *butanoensis*	FT	SE	CRPR 1B.2	Closed-cone coniferous forest, lower montane coniferous forest, chaparral. Sandstone. 1,310–1,610 feet in elevation. Blooms October.	Not Expected to Occur: The treatment area contains habitat and soils suitable for this species; however, this subspecies is confined to stands on Butano Ridge (CNPS 2021). Therefore, the treatment area is outside of the range of this species.
Santa Cruz tarplant *Holocarpha macradenia*	FT	SE	LCP CRPR 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland. Light, sandy soil or sandy clay; often with nonnatives. 33–722 feet in elevation. Blooms June–October.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain coastal scrub, grassland, or coastal prairie habitat suitable for this species.
Kellogg's horkelia *Horkelia cuneata* var. *sericea*			LCP CRPR 1B.1	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. 15–705 feet in elevation. Blooms April–September.	Could Occur: The treatment area contains coniferous forest habitat and soils suitable for this species.
Point Reyes horkelia *Horkelia marinensis*	-	-	LCP CRPR 1B.2	Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub communities. 5–2,540 feet in elevation. Blooms May–September.	Not Expected to Occur: The treatment area does not contain coastal dune, coastal prairie, or scrub habitat suitable for this species.
Perennial goldfields *Lasthenia californica ssp. macrantha*	-	-	CRPR 1B.2	Coastal bluff scrub, coastal dunes, and coastal scrub. 15- 1,705 feet in elevation. Blooms January-November.	Not Expected to Occur: The treatment area does not contain coastal dune, coastal bluff scrub, or scrub habitat suitable for this species.
Legenere *Legenere limosa*	-	-	CRPR 1B.1	Vernal pools, wetland. In beds of vernal pools. 5–2,890 feet in elevation. Blooms April–June.	Not Expected to Occur: The treatment area does not contain vernal pool habitat suitable for this species.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Rose leptosiphon *Leptosiphon rosaceus*	-	-	CRPR 1B.1	Coastal bluff scrub. 0- 330 feet in elevation. Blooms April - July.	Not Expected to Occur: The treatment area does not contain coastal bluff scrub habitat suitable for this species.
Redwood lily *Lilium rubescens*	-	-	LCP CRPR 4.2	Ultramafic. Chaparral, lower montane coniferous forest, broad-leafed upland forest, upper montane coniferous forest, north coast coniferous forest. Sometimes on serpentine. 100–6,270 feet in elevation. Blooms April–August and as late as September in some conditions.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable chaparral habitat is present within the treatment area.
Point Reyes meadowfoam *Limnanthes douglasii* ssp. *sulphurea*		SE	CRPR 1B.2	Wetland. Marshes and swamps (freshwater), vernal pools, coastal prairie, meadows and seeps. Vernally wet depressions in open rolling, coastal prairies and meadows; typically, in dark clay soil. 30–410 feet in elevation. Blooms March–May.	Not Expected to Occur: The treatment area does not contain vernal pool, marsh, or swamp habitat suitable for this species.
Small leaved lomatium *Lomatium parvifolium*	-	-	LCP CRPR 4.2	Ultramafic. Closed-cone coniferous forest, chaparral, coastal scrub, riparian woodland. On serpentine. 66–2297 feet in elevation. Blooms January–June.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the species is not documented to occur in the project region (CNPS 2021). Suitable serpentine soils do not occur within the treatment area.
Arcuate bush-mallow *Malacothamnus arcuatus*	_	_	CRPR 1B.2	Chaparral, cismontane woodland. Gravelly alluvium. 3–2,410 feet in elevation. Blooms April–September.	Could Occur: The treatment area contains chaparral habitat suitable for this species.
Marsh microseris *Microseris paludosa*	_	_	CRPR 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 15–980 feet in elevation. Blooms April–June, and as late as July in some conditions.	Could Occur: The treatment area contains closed-cone coniferous forest habitat suitable for this species.
Santa Cruz County monkeyflower *Mimulus rattanii* spp. *decutatus*	-	-	LCP CRPR 4.2	Chaparral, lower montane coniferous forest. Gravelly sites at margins of vegetation. 1,310–1,640 feet in elevation. Blooms May–July.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable chaparral habitat is found within the treatment area.
Northern curly-leaved monardella *Monardella sinuata* ssp. *nigrescens*	-	-	CRPR 1B.2	Coastal dunes, coastal scrub, chaparral, lower montane coniferous forest. Sandy soils. 0–980 feet in elevation. Blooms May–July sometimes as early as April and as late as September.	Could Occur: The treatment area contains chaparral habitat and sandy soils suitable for this species.
San Luis Obispo monardella *Monardella undulata* spp. *Undulata*	-	-	LCP CRPR 1B.2	Coastal dunes, coastal scrub. Stabilized sand of the immediate coast. 33–656 feet in elevation. Blooms May–September.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, while coastal scrub is present in the treatment area, it is not in stabilized sand.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Woodland woollythreads *Monolopia gracilens*	-	-	CRPR 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broad-leafed upland forest, north coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns but may have only weak affinity to serpentine. 330–3,940 feet in elevation. Blooms March–July and as early as February under some conditions.	Could Occur: The treatment area contains coniferous forest, chaparral, and rocky soils suitable for this species.
Kellman's bristle moss *Orthotrichum kellmanii*	-	-	CRPR 1B.2	Chaparral, cismontane woodland. Sandstone outcrops with high calcium concentrations from eroded boulders out of non-calcareous sandstone bedrock. Rock outcrops in small openings within dense chaparral with overstory of scattered *Pinus attenuata*. 1,125–2,250 feet in elevation. Blooms January–February.	Could Occur: The treatment area contains chaparral on sandstone derived soils and an overstory of *Pinus attenuata* suitable for this species.
Dudley's lousewort *Pedicularis dudleyi*	_	SR	LCP CRPR 1B.2	Chaparral, north coast coniferous forest, valley and foothill grassland. Deep shady woods of older coast redwood forests; also, in maritime chaparral. 200–2,950 feet in elevation. Blooms April–June.	Could Occur: The treatment area contains chaparral and coniferous forest habitat suitable for this species.
Santa Cruz Mountains beardtongue *Penstemon rattanii* var. *kleei*	-	-	LCP CRPR 1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest. Sandy shale slopes; sometimes in the transition between forest and chaparral. 1,310–3,610 feet in elevation. Blooms May–June.	Could Occur: The treatment area contains coniferous forest habitat; and contains the sandy soils suitable for this species.
White-rayed pentachaeta *Pentachaeta bellidiflora*	FE	SE	LCP CRPR 1B.1	Valley and foothill grassland, cismontane woodland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. 115–2001 feet in elevation. Blooms March–May.	Not Expected to Occur: The treatment area does not contain the grassland or woodland habitat, or serpentine soils suitable for this species.
Gairdner's yampah *Perideridia gairdneri* ssp. *gairdneri*	-	-	LCP CRPR 4.2	Broad-leafed upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools, vernally mesic sites. 0 to 2,000 feet in elevation. Blooms Jun -Oct	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains suitable habitat for this species.
Monterey pine *Pinus radiata*	-	-	LCP CRPR 1B.1	Closed-cone coniferous forest, cismontane woodland. Three primary stands are native to California. Dry bluffs and slopes. 200–410 feet in elevation.	Not Expected to Occur: Monterey pine was not observed within the treatment area during reconnaissance survey. Closed-cone forest in treatment area is made up of knob-cone pine.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
White-flowered rein orchid *Piperia candida*	-	-	CRPR 1B.2	North coast coniferous forest, lower montane coniferous forest, broad-leafed upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 150–5,300 feet in elevation. Blooms As early as March in some conditions; however, generally blooms May–September.	Could Occur: The treatment area contains forest habitat suitable for this species.
Michael's rein orchid *Piperia elongata* spp *michaelii*	-	-	LCP CRPR 4.2	Coastal bluff scrub, coastal scrub, cismontane woodland, chaparral, closed-cone coniferous forest, lower montane coniferous forest. Mudstone and humus, generally dry sites. 10–3002 feet in elevation. Blooms April–August.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains suitable habitat.
Choris' popcornflower *Plagiobothrys chorisianus* var. *chorisianus*	-	-	LCP CRPR 1B.2	Chaparral, coastal scrub, coastal prairie. Mesic sites. 50–525 feet in elevation. Blooms March–June.	Could Occur: The treatment area contains chaparral habitat suitable for this species.
San Francisco popcornflower *Plagiobothrys diffusus*	-	SE	LCP CRPR 1B.1	Valley and foothill grassland, coastal prairie. Historically from grassy slopes with marine influence. 150–1,180 feet in elevation. Blooms March–June.	Not Expected to Occur: The treatment area does not contain grassland, or coastal prairie habitat suitable for this species.
Scotts Valley polygonum *Polygonum hickmanii*	FE	SE	CRPR 1B.1	Valley and foothill grassland. Purisima sandstone or mudstone with a thin soil layer; vernally moist due to runoff. 690–755 feet in elevation. Blooms May–August.	Not Expected to Occur: The treatment area does not contain grassland, or Purisima sandstone/mudstone suitable for this species.
Valley oak *Quercus lobata*	-	-	LCP	Foothill woodlands. 0-7,420 feet. Booms February – March.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; however, the range of the species does not extend to the coast where the treatment area is located.
Lobb's aquatic buttercup *Ranunculus lobbii*	-	-	LCP CRPR 4.2	Vernal pools in cismontane woodland, valley and foothill grassland, and north coast coniferous forest. 50–1,540 feet in elevation. Blooms February–May.	Not Expected to Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain vernal pool habitat required for this species.
Straggly gooseberry *Ribes divaricatum* var. *publiflorum*	-	-	LCP	Wetland and riparian. 0 -4,700 feet. Blooms March – May.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area may contain suitable wetland or riparian habitat.
Pine rose *Rosa pinetorum*	-	-	CRPR 1B.2	Closed-cone coniferous forest, cismontane woodland. 15–3,580 feet in elevation. Blooms May–July.	Could Occur: The treatment area contains coniferous forest habitat suitable for this species.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Hoffmann's sanicle *Sanicula hoffmannii*	-	-	LCP CRPR 4.3	Broad-leafed upland forest, coastal scrub, coastal bluff scrub, chaparral, cismontane woodland, lower montane coniferous forest. Cool slopes in deep soil, often in moist shaded serpentine soils, or in clay soils. 100–1,000 feet in elevation. Blooms March–May.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains suitable habitat for this species.
Chaparral ragwort *Senecio aphanactis*	-	-	CRPR 2B.2	Drying alkaline flats in chaparral, cismontane woodland, and coastal scrub. 70–2,810 feet in elevation. Blooms January–April, and as late as May in some conditions.	No Expected to Occur: The treatment area contains chaparral habitat; however, no alkaline flats suitable for this species.
Scouler's catchfly *Silene scouleri* ssp. *scouleri*	-	-	LCP CRPR 2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland. 0–1,970 feet in elevation. Blooms March–May in some conditions; however, generally blooms June–August or as late as September.	Not Expected to Occur: The treatment area does not contain grassland, coastal bluff scrub, or coastal prairie habitat suitable for this species.
San Francisco campion *Silene verecunda* ssp. *verecunda*	-	-	LCP CRPR 1B.2	Coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, coastal prairie. Often on mudstone or shale; one site on serpentine. 100–2,120 feet in elevation. Blooms March–June, and as early as February and as late as August in some locations.	Could Occur: The treatment area contains chaparral habitat suitable for this species.
Santa Cruz microseris *Stebbinsoseris decipiens* (*Microseris decipiens*)	-	-	LCP CRPR 1B.2	Broad-leafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal prairie, coastal scrub, and valley and foothill grassland. 35- 1,640 feet in elevation. Blooms April – May.	Could Occur: The treatment area contains closed-cone coniferous forest and chaparral habitat suitable for this species.
Northern slender pondweed *Stuckenia filiformis ssp. alpina*	-	-	CRPR 2B.2	Freshwater marshes and swamp in shallow water. 985 – 7,055 feet in elevation. Blooms May – July.	Not Expected to Occur: The treatment area does not contain suitable marsh or swamp habitat for this species.
Mt. Diablo cottonweed *Stylocline amphiboia (Micropus amphiboles)*	-	-	LCP CRPR 3.2	Valley and foothill grassland, cismontane woodland, chaparral, broad-leafed upland forest. Bare, grassy or rocky slopes. 150–2,700 feet in elevation. Blooms March–May.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains suitable habitat for this species.
Santa Cruz clover *Trifolium buckwestiorum*	-	-	CRPR 1B.1	Coastal prairie, broad-leafed upland forest, cismontane woodland. Moist grassland, gravelly margins, habitat edges. 340–2,000 feet in elevation. Blooms April–October.	Could Occur: The treatment area contains stands of broad-leafed upland forest habitat that may be suitable for this species.
West's clover *Trifolium grayi*	-	-	LCP	Wetland habitat within redwood forest and mixed evergreen fores,. 0 to 2,295 feet. Blooms April-June.	Could Occur: This species is identified in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan; The treatment area contains wetland habitat suitable for this species.

Species	Status [1]			Habitat and Blooming Period	Potential for Occurrence [2]
	Federal	State	Other		
Pacific Grove clover *Trifolium polyodon*	-	SR	CRPR 1B.1	Closed-cone coniferous forest, meadows and seeps, coastal prairie, valley and foothill grassland. Along small springs and seeps in grassy openings. 20–400 feet in elevation. Blooms April–June sometimes as late as July.	Not Expected to Occur: The treatment area contains coniferous forest habitat; however, does not contain seeps suitable for this species.

Notes: CRPR = California Rare Plant Rank; CNPS California Native Plant Society; ESA = Federal Endangered Species Act; CESA = California Endangered Species Act; NPPA = Native Plant Protection Act

Shading used to highlight species that could occur within the treatment area (see definitions below).

[1] Legal Status Definitions

Federal:
SE Endangered (legally protected by ESA)
ST Threatened (legally protected by ESA)

State:
SR Rare (legally protected by NPPA)
ST Threatened (legally protected by CESA)

Other:

CRPR (see above)
LCP Species listed in the Santa Cruz County Local Coastal Program Forest Health and Fire Resilience Public Works Plan.

California Rare Plant Ranks:

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA).
2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA).
3 Plant species for which more information is needed (not protected under CEQA).
4 Plants of limited distribution, a watch list .

Threat Ranks

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat).
0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat).

[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.
Could occur: Suitable habitat is available at the project site; however, there are little to no other indicators that the species might be present.
Known to occur: The species, or evidence of its presence, was observed at the project site during reconnaissance surveys, or was reported by others.

Sources: Calflora 2021a; Calflora 2021b; CNPS 2021; Lanner 1999; NRCS 2021;

Table B-2 Special-Status Wildlife Known to Occur in the Project Region and their Potential to Occur in the Treatment Area During Initial and Maintenance Treatments

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Invertebrates					
Mimic tryonia (=California brackishwater snail) *Tryonia imitator*	-	-	LCP	Brackish marsh, estuary, lagoon, marsh and swamp, salt marsh, wetland. Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.	Not expected to occur: The species has been documented within the region (CNDDB 2021). The treatment area does not contain suitable habitat. Species listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan.
Dolloff Cave spider *Meta dolloff*	-	-	LCP	Limestone. Known from caves in the Santa Cruz area. This species is an orb-weaver and occurs from the cave mouth into deep twilight.	Not expected to occur: The treatment area does not contain suitable cave habitat. Species listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan.
Empire Cave pseudoscorpion *Fissilicreagris imperialis*	-	-	LCP	Limestone. Known only from Empire Cave in Santa Cruz County.	Not expected to occur: The species is only known from Empire Cave. No suitable habitat present within the treatment area.
Monarch - California overwintering population *Danaus plexippus* pop.[1]	-	-	LCP	Closed-cone coniferous forest. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	Not expected to occur: The species has been documented to occur within the project region (CNDDB 2021); however, the closed-cone and eucalyptus within the treatment area do not provide the protection required for winter roosts post fire.
Mount Hermon (=barbate) June beetle *Polyphylla barbata*	FE	-	LCP	Interior dunes. Known only from sand hills in vicinity of Mt. Hermon, Santa Cruz County.	Not expected to occur: The treatment area is located outside of the Sand Hills ecosystem (Santa Cruz County 2011); therefore, the treatment area does not contain suitable habitat for this species.
Myrtle's silverspot butterfly *Speyeria zerene myrtleae*	FE	-	-	Coastal dunes. Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval foodplant thought to be *Viola adunca*.	Not expected to occur: The species has been documented to occur historically within the region (CNDDB 2021); however, the species has been extirpated from the region.
Opler's longhorn moth *Adela oplerella*	-	-	LCP	Ultramafic, valley and foothill grassland. From Marin Co and the Oakland area on the inner coast ranges south to Santa Clara County. One record from Santa Cruz County. All but Santa Cruz site is on serpentine grassland.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. Suitable grassland habitat is not present in the treatment area.

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Smith's blue butterfly *Euphilotes enoptes smithi*	FE	-	-	Coastal dunes, coastal scrub. Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz counties. Hostplant: Eriogonum latifolium and Eriogonum parvifolium are utilized as both larval and adult foodplants.	Not expected to occur: The species has been documented within the region (CNDDB 2021); however, the treatment area is located outside of the Sand Hills ecosystem (Santa Cruz County 2011) and coastal dune/coastal scrub habitat; therefore, the treatment area does not contain suitable habitat for this species.
Western bumble bee *Bombus occidentalis*	-	SC	-	Meadows and grasslands with abundant floral resources (Xerces Society 2018).	Not expected to occur: The species has been documented to occur historically within the region (CNDDB 2021); however, the treatment area does not contain suitable meadow or grassland habitat.
Zayante band-winged grasshopper *Trimerotropis infantilis*	FE	-	-	Chaparral, interior dunes. Isolated sandstone deposits in the Santa Cruz Mountains (the Zayante Sand Hills ecosystem) Mostly on sand parkland habitat but also in areas with well-developed ground cover and in sparse chaparral with grass.	Not expected to occur: The treatment area is located outside of the Sand Hills ecosystem (Santa Cruz County 2011); therefore, the treatment area does not contain suitable habitat for this species.
Fish					
Coho salmon - central California coast ESU *Oncorhynchus kisutch* pop. 4	FE	SE	LCP	Federal listing = pops between Punta Gorda and San Lorenzo River. State listing includes populations south of Punta Gorda. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	Not expected to occur: The species has been documented within the region (CNDDB 2021); however, Whitehouse Creek is blocked to fish passage in two locations below the treatment area (CDFW 2021a). Therefore, there is no habitat for this species adjacent to the treatment area.
Longfin smelt *Spirinchus thaleichthys*	FC	SSC	-	Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	Not expected to occur: The species has been documented within the region (CNDDB 2021a); however, the treatment area does not contain suitable aquatic habitat for this species and there is no aquatic habitat for this species adjacent to the treatment area.
Steelhead - central California coast DPS *Oncorhynchus mykiss irideus* pop. 8	FT	-	-	Sacramento/San Joaquin flowing waters. From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.	Not expected to occur: The species has been documented within the region (CNDDB 2021); however, Whitehouse Creek is blocked to fish passage in two locations below the treatment area (CDFW 2021a). Therefore, there is no habitat for this species adjacent to the treatment area.

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Tidewater goby *Eucyclogobius newberryi*	FE	SSC	LCP	Klamath/north coast flowing waters, Sacramento/San Joaquin flowing waters, South coast flowing waters. Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.	Not expected to occur: The species has been documented within the region (CNDDB 2021); however, the treatment area does not contain suitable aquatic habitat for this species and there is no aquatic habitat for this species adjacent to the treatment area.
Amphibians and Reptiles					
Santa Cruz long-toed salamander *Ambystoma macrodactylum croceum*	FE	SE FP	LCP	Freshwater marsh, marsh and swamp, and wetlands. Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey counties. Aquatic larvae prefer shallow (<12 inches) water, using clumps of vegetation or debris for cover. Adults use mammal burrows for cover.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable aquatic habitat for this species and there is no aquatic habitat for this species adjacent to the treatment area.
Santa Cruz black salamander *Aneides niger*	–	SSC	-	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara counties. Adults found under rocks, talus, and damp woody debris.	Could Occur: The species has been documented to occur within the project region (CNDDB 2021); and the treatment area contains habitat suitable for this species.
California giant salamander *Dicamptodon ensatus*	-	SSC	-	Meadow and seep, north coast coniferous forest, and riparian forest. Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	Could occur: The species has been documented to occur within the project region (CNDDB 2021); and treatment area contains habitat suitable for this species.
Coast horned lizard *Phrynosoma blainvillii*	-	SSC	LCP	Chaparral, cismontane woodland, coastal bluff scrub, coastal scrub, desert wash, pinyon and juniper woodlands, riparian scrub, riparian woodland, valley and foothill grassland. Frequents a wide variety of habitats, most common in lowlands along sandy wash.	Not expected to occur: The species has not been documented within the region (CNDDB 2021) and the treatment area is outside of the range of the species (CalHerps 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan, and the treatment area contains suitable habitat for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
California red-legged frog *Rana draytonii*	FT	SSC	LCP	Artificial flowing waters, artificial standing waters, freshwater marsh, marsh & swamp, riparian forest, riparian scrub, riparian woodland, Sacramento/San Joaquin flowing waters, Sacramento/San Joaquin standing waters, south coast flowing waters. Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Could occur: The species has been documented to occur within Whitehouse Creek approximately, 0.8 mile from the treatment area (CNDDB 2021), and treatment area contains habitat suitable upland habitat for this species.
Foothill yellow-legged frog *Rana boylii*	-	SE SSC	-	Aquatic, chaparral, cismontane woodland, coastal scrub, Klamath/north coast flowing waters, lower montane coniferous forest, meadow and seep, riparian forest, riparian woodland, and Sacramento/San Joaquin flowing waters. Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis. Endangered: Southern Sierra, Central Coast, South Coast. Threatened: Feather River, Northern Sierra. North Coast: Not Listed.	Could occur: The species has been documented at one location within the last 20 years within the region (CNDDB 2021); however, more widespread occurrence historically. Whitehouse Creek is suitable habitat for this species.
Red-bellied newt *Taricha rivularis*	-	SSC	-	Broad-leafed upland forest, north coast coniferous forest, redwood, riparian forest, and riparian woodland. Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean rocky substrate.	Not expected to occur: The treatment area contains suitable habitat for this species; however, the only documented occurrence of the species south of Sonoma County is located on the eastern slope of the Santa Cruz Mountains within the Stevens Creek drainage approximately 14 miles from the treatment area (CNDDB 2021).
San Francisco gartersnake *Thamnophis sirtalis tetrataenia*	FE	SE FP	LCP	Artificial standing waters, marsh and swamp, Sacramento/San Joaquin standing waters, wetland. Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.	Not expected to occur: The species hhas been documented to occur within the project region (CNDDB 2021). Suitable habitat for the species is located at just over 1.0 mile from the treatment area; however, the small wet area within the camp does not stay wet for a substantial time during the year, and upland habitat within the treatment area is too far from suitable aquatic habitat to be suitable upland habitat for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Western pond turtle *Actinemys marmorata*	-	SSC	LCP	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not expected to occur: The species has been documented to occur within the project region (CNDDB 2021). Whitehouse Creek provides suitable aquatic habitat for the species; however, suitable upland basking sites are not present.
		Birds			
American peregrine falcon *Falco peregrinus anatum*	FD	SD FP	-	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	Not expected to occur: The treatment area does not contain the vertical bank/cliff habitat that would be suitable for nesting by this species. The species has been documented to occur within the project region (CNDDB 2021).
Bank swallow *Riparia riparia*	-	ST	LCP	Riparian scrub, riparian woodland. Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Not expected to occur: The treatment area does not contain the vertical bank/cliff habitat that would be suitable for nesting by this species. The species has been documented to occur within the project region (CNDDB 2021).
Black-crowned night heron *Nycticorax nycticorax*	-	-	LCP	Marsh and swamp, riparian forest, riparian woodland, and wetlands. Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable habitat for this species.
Black swift *Cypseloides niger*	-	SSC	LCP	Coastal belt of Santa Cruz and Monterey Co; central and southern Sierra Nevada; San Bernardino and San Jacinto Mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely	Not expected to occur: The treatment area does not contain cliff or waterfall habitat that would be suitable for nesting by this species. The species has been documented to occur within the project region (CNDDB 2021).
Burrowing owl *Athene cunicularia*	-	SSC	LCP	Coastal prairie, coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, and valley and foothill grassland. Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not expected to occur: The treatment area contains coastal scrub habitat that would be suitable for this species; however, as the treatment area recovers from the CZU Complex the area will not provide the open habitat required for this species, nor is there sufficient connectivity to other open habitats to make colonization likely. The species has been documented to occur within the project region (CNDDB 2021).

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
California black rail *Laterallus jamaicensis coturniculus*	-	ST FP	-	Brackish marsh, freshwater marsh, marsh and swamp, salt marsh, wetland. Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	Not expected to occur: The treatment area does not contain marsh habitat that would be suitable for this species. The species has been documented to occur within the project region (CNDDB 2021).
California brown pelican *Pelecanus occidentalis californicus*	FD	SD FP	LCP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is a frequent visitor to the Santa Cruz County coast and is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable habitat for this species.
California least tern *Sternula antillarum browni*	FE	SE FP	LCP	Alkali playa, wetland. Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Not expected to occur: This species is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain playa, wetland, or beach habitat that would be suitable for this species.
California spotted owl *Strix occidentalis occidentalis*	-	SSC	LCP	Broad-leafed upland forest, lower montane coniferous forest, and upper montane coniferous forest. Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods. Canopy closure >40 percent. Most often found in deep-shaded canyons and similar forest habitats.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area post fire does not contain habitat with sufficient canopy cover for this species.
Cooper's hawk *Accipiter cooperii*	-	-	LCP	Cismontane woodland, riparian forest, riparian woodland, upper montane coniferous forest. Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Could occur: The species has not been documented to occur within the project region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. As the treatment area recovers from the fire it is likely to contain the patchy open oak habitat required for this species.
Double-crested cormorant *Phalacrocorax auratus*	-	-	LCP	Riparian forest, riparian scrub, riparian woodland. Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is a frequent visitor to the Santa Cruz County coast and is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable habitat for this species.

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Ferruginous hawk *Buteo regalis*	-	-	LCP	Great Basin grassland, Great Basin scrub, pinyon and juniper woodlands, valley and foothill grassland. Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain sufficient suitable open grassland habitat for this species.
Golden eagle *Aquila chrysaetos*	-	FP	LCP	Broad-leafed upland forest, cismontane woodland, coastal prairie, Great Basin grassland, Great Basin scrub, lower montane coniferous forest, pinyon and juniper woodlands, upper montane coniferous forest, and valley and foothill grassland. Rolling foothills	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area and surrounding habitat is too heavily wooded for the species to be expected to occur.
Long-eared owl *Asio otus*	-	SSC	-	Cismontane woodland, Great Basin scrub, riparian forest, riparian woodland, and upper montane coniferous forest. Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	Not expected to occur: The species has been documented to occur within the project region (CNDDB 2021); However, the treatment area is not adjacent to suitable open land, and therefore does not contain suitable habitat for the species.
Marbled murrelet *Brachyramphus marmoratus*	FT	SE	LCP	Lower montane coniferous forest, old growth, redwood. Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	Not expected to occur: The species has been documented to occur within the project region (CNDDB 2021). The treatment area contains two large trees with platforms for nesting; however, these trees are located within the camp and are not suitable due to recreation disturbance (CDFW 2021b).
Merlin *Falco columbarius*	-	-	LCP	Estuary, Great Basin grassland, valley and foothill grassland. Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain sufficient open grassland habitat for this species.
Osprey *Pandion haliaetus*	-	-	LCP	Riparian forest. Ocean shore, bays, fresh-water lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Not expected to occur: The treatment area contains suitable nesting habitat for the species; however, the location up Whitehouse Canyon from the coast makes nesting unlikely. The species has not been documented to occur within the project region (CNDDB 2021).

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Purple martin *Progne subis*	-	SSC	LCP	Broad-leafed upland forest, lower montane coniferous forest. Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area contains suitable nesting habitat for this species.
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	BCC	SSC	-	Marsh and swamp. Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.	Not expected to occur: The treatment area does not contain marsh habitat that would be suitable nesting habitat for this species. The species hhas been documented to occur within the project region (CNDDB 2021).
Sharp-shinned hawk *Accipiter striatus*	-	-	LCP	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland. Ponderosa pine, black oak, riparian deciduous, mixed conifer and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes, with plucking perches are critical requirements. Nests usually within 275 feet of water.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable riparian nesting habitat for this species.
Tricolored blackbird *Agelaius tricolor*	-	ST SSC	LCP	Freshwater marsh, marsh and swamp, swamp, wetland. Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	Not expected to occur: The species has been documented to occur within the project region (CNDDB 2021); however, the habitat within the treatment area is not suitable nesting or foraging habitat for this species.
Western snowy plover *Charadrius alexandrinus nivosus*	FT	SSC	LCP	Great Basin standing waters, sand shore, wetland. Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	Not expected to occur: The species hhas been documented to occur within the project region (CNDDB 2021); however, the treatment area does not contain suitable beach or sandy shore habitat.
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FT	SE	LCP	Riparian forest. Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable habitat for this species.
White-tailed kite *Elanus leucurus*	-	FP	-	Cismontane woodland, marsh and swamp, riparian woodland, valley and foothill grassland, and wetlands. Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Not expected to occur: The treatment area and vicinity does not contain sufficient suitable open grassland habitat for the species. The species has not been documented to occur within the project region (CNDDB 2021).

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Willow flycatcher *Empidonax traillii*	-	SE	LCP	Meadow and seep, riparian scrub, riparian woodland, and wetlands. Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2,000-8,000 feet elevation Requires dense willow thickets for nesting/roosting. Low, exposed	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable habitat for this species.
Yellow-breasted chat *Icteria virens*	--	SSC	LCP	Riparian forest, riparian scrub, riparian woodland. Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable riparian habitat for this species.
Yellow rail *Coturnicops noveboracensis*	-	SSC	-	Freshwater marsh, meadow and seep. Summer resident in eastern Sierra Nevada in Mono County. Fresh-water marshlands.	Not expected to occur: The species has been documented to occur within the project region (CNDDB 2021); however, the treatment area does not contain suitable marsh, habitat.
Yellow warbler *Setophaga petechia*	-	SSC	LCP	Riparian forest, riparian scrub, riparian woodland. Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable habitat for this species.
Mammals					
American badger *Taxidea taxus*	-	SSC	LCP	Alkali marsh, alkali playa, alpine, alpine dwarf scrub, bog a fen, brackish marsh, broad-leafed upland forest, chaparral, chenopod scrub, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Could occur: The portions of the treatment area contain suitable habitat for the species. The species has been documented to occur within the project region near Pidgeon Point (CNDDB 2021).

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Ringtail *Bassariscus astutus*	-	FP	-	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations. Usually found within 0.6 mile of a permanent water source.	Could occur: The treatment area contains suitable forested habitat for this species. There are no documented occurrences in the project region; although the species in not tracked in the CNDDB.
Mountain lion-Southern California/Central Coast evolutionary significant unit *Puma concolor*	-	CT	-	Found in most habitats within Central California. Uses caves, other natural cavities, and brush thickets for cover and denning often within riparian habitats.	Could occur: The treatment area during Phase I contains suitable foraging habitat for mountain lion. Although nursery habitat is unlikely to occur within or adjacent to the treatment area (Yovovich pers. comm. 2021).
Monterey shrew *Sorex ornatus salaries*	-	SSC	LCP	Riparian, wetland and upland areas in the vicinity of the Salinas River delta. Prefers moist microhabitats. feeds on insects and other invertebrates found under logs, rocks and litter.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable habitat for this species and is located outside of its range.
Pallid bat *Antrozous pallidus*	-	SSC	-	Chaparral, coastal scrub, desert wash, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, riparian woodland, Sonoran desert scrub, upper montane coniferous forest, valley and foothill grassland. Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Could occur: The treatment area contains suitable roosting and foraging habitat for the species. The species has been documented to occur only historically within the project region (CNDDB 2021); however, bat species may be under reported.
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	-	SSC	-	Chaparral, redwood. Forest habitats of moderate canopy and moderate to dense understory. May prefer chaparral and redwood habitats. Constructs nests of shredded grass, leaves and other material. May be limited by availability of nest-building materials.	Could occur: The treatment area contains suitable forested habitat, with moderate to dense understory in some locations. Documented to occur within the project region (CNDDB 2021).
Santa Cruz harvest mouse *Reithrodontomys megalotis santacruzae*	-	-	LCP	Chaparral, coastal scrub, marsh and swamp, wetland. Known only from Santa Cruz Island. May be limited to the Prisoners Harbor area. Heavy reliance on mesic habitats in the Prisoners Harbor area.	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area contains suitable habitat for this species; however, is located outside of its range.

Species	Listing Status[1]			Habitat	Potential for Occurrence[2]
	Federal	State	Other		
Southern sea otter *Enhydra lutris nereis*	FT	FP	LCP	Aquatic, protected deepwater coastal communities. Nearshore marine environments from about Ano Nuevo, San Mateo County to Point Sal, Santa Barbara County. Needs canopies of giant kelp and bull kelp for rafting and feeding. Prefers rocky substrates with ab	Not expected to occur: The species has not been documented within the region (CNDDB 2021); however, is listed in the Santa Cruz County Forest Health and Fire Resilience Public Works Plan. The treatment area does not contain suitable habitat for this species.
Steller (=northern) sea-lion *Eumetopias jubatus*	FD	-	LCP	Marine intertidal and splash zone communities, protected deepwater coastal communities, rock shore. Breeds on Ano Nuevo, San Miguel and Farallon islands, Pt. St. George, and Sugarloaf. Hauls-out on islands and rocks. Needs haul-out and breeding sites with unrestricted access to water, near aquatic food supply and with no human disturbance.	Not expected to occur: The species has been documented to occur within the project region near Pidgeon Point (CNDDB 2021); however, the treatment area does not contain suitable habitat for this species.
Townsend's big-eared bat *Corynorhinus townsendii*	-	SSC	-	Broad-leafed upland forest, chaparral, chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, lower montane coniferous forest, meadow & seep, Mojavean desert scrub, riparian forest, riparian woodland, Sonoran desert scrub. Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Not expected to occur: The species has been documented to occur within the project region (CNDDB 2021); however, the treatment area does not contain suitable roosting habitat for this species (caves, mines, abandoned buildings, or similar structures). Structures on site get frequent maintenance.

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service; ESU = Evolutionary Significant Unit; DPS= Distinct Population Segment.

Shading used to highlight species that could occur within the treatment area (see definitions below).

[1] Legal Status Definitions

Federal :
FE Endangered (legally protected by ESA)
FT Threatened (legally protected by ESA)
FD Federally Delisted

State:
SE Endangered (legally protected by CESA)
ST Threatened (legally protected by CESA)
CT Candidate Threatened (legally protected by CESA)
SD State Delisted
FP Fully protected (legally protected)
SSC Species of special concern (no formal protection other than CEQA consideration)

Other:

CRPR (see above)
LCP Species listed in the Santa Cruz County Local Coastal Program Forest Health and Fire Resilience Public Works Plan.

Federal:
E Endangered (legally protected)
T Threatened (legally protected)
CE Candidate Endangered (legally protected)
E Endangered (legally protected)
T Threatened (legally protected)

FP Fully protected (legally protected)
SC Species of special concern (no formal protection other than CEQA consideration)

[2] Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present in the treatment area due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.
Could occur: Suitable habitat is available in the treatment area; however, there are little to no other indicators that the species might be present.
Known to occur: The species, or evidence of its presence, has been reported by others.

Source: CalHerps 2021; CNDDB 2021; CDFW 2021a; CDFW 2021b; Santa Cruz County 2011; Xerces Society 2018; Yovovich pers. comm. 2021

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Appendix C

California Department of Fish and Wildlife Consultation Memo

Memo

455 Capitol Mall, Suite 300
Sacramento, CA 95814
916.444.7301

Date: January 21, 2022

To: Robynn Swan; California Department of Fish and Wildlife

From: Matt Abernathy, Resource Conservation District of Santa Cruz County
Ted Thayer (Qualified Biologist), Lara Rachowicz (Qualified Biologist), and Lily Bostrom; Ascent Environmental

Subject: Consultation regarding Mitigation Measure BIO-2a of the CalVTP Program EIR for the Camp Skylark and Last Chance Road Forest Health Projects, Approach to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Ringtail and Mountain Lion

Background and Context

The California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (EIR), certified by the Board of Forestry and Fire Protection in December 2019, evaluates the potential environmental effects of implementing qualifying vegetation treatments to reduce the risk of wildfire. The California Department of Forestry and Fire Protection (CAL FIRE) awarded the Resource Conservation District (RCD) of Santa Cruz County a Forest Health Grant for the Skylark Ranch and Last Chance Road Forest Health Projects, which include conducting forest management actions in northern Santa Cruz County to enhance habitat conditions and forest functions with the added benefit of reducing wildfire. The Skylark Ranch Forest Health Project would occur at Skylark Ranch Girl Scout Camp in western Santa Cruz County and would encompass several individual treatment areas totaling approximately 60 acres. The Last Chance Road Forest Health Project would occur within an approximately 60-acre area along Last Chance Road. Both projects were severely burned in the 2020 CZU Lightning Complex.

The Last Chance Road Forest Health Project hosts one of three endemic stands of Monterey pine within California. Before the 2020 CZU Lightning Complex, encroaching Douglas fir was inhibiting seedling growth and regeneration of the native stand of Monterey pine. Following the 2020 CZU Lightning Complex, the existing Monterey pine seedbank was given an opportunity to reoccupy this hillside. The potential denning and foraging habitat for ringtail and foraging habitat for mountain lion within the Last Chance Road treatment area was substantially altered by the 2020 CZU Lightning Complex. The fire resulted in between 60 and 100 percent tree mortality and killed and removed much of the understory vegetation.

The Skylark Ranch Girl Scout Camp occupies on a parcel that stretches from White House Creek to the ridge top delineating White House Creek Canyon. Preceding the 2020 CZU Lightning Complex, the property had overly dense stands of trees, creating crowded forest conditions. Skylark Ranch's forest consisted of tanoak, Douglas fir, coast redwood, with a stand of old growth coast redwood, and chaparral. Following the 2020 CZU Lightning Complex, the low- to high-severity burns caused a significant amount of mortality; however, it was not severe enough to eliminate the excess fuel or reduce the density of the remaining live vegetation. The potential habitat for both ringtail and mountain lion within the Skylark Ranch treatment area was substantially altered by the 2020 CZU Lightning Complex.

The fire resulted in an approximately 100 percent reduction in cover within knobcone pine and coastal scrub habitats. Both projects require specific treatments to encourage beneficial forest ecosystem function.

Manual treatments, mechanical treatments (i.e., cutting or limbing vegetation with a masticator, feller-buncher, skid steer, or chipper), and targeted application of herbicides using hand-held devices (i.e., cut stump or foliar spray application of herbicides) would be used for both the Skylark Ranch and Last Chance Road projects. The Skylark Ranch project would conduct initial treatments consisting of ecological restoration and the creation of shaded fuel breaks followed by ongoing maintenance treatments. Both the initial treatments and ongoing maintenance would include manual and mechanical treatments, and targeted herbicide application.

The Last Chance Road Project would be implemented in three phases, including Phase I treatments, Phase II treatments, and ongoing maintenance treatments. Phase I would involve ecological restoration treatments using mechanical equipment only to remove dead, dying, and diseased trees, hazard trees, and downed material. Phase II would involve ecological restoration and the creation of a shaded fuel break using manual and mechanical treatment activities, and targeted herbicide use. Ongoing treatment maintenance would occur as needed using manual and mechanical treatments activities, and targeted herbicide application.

In compliance with the California Environmental Quality Act (CEQA), the RCD is currently preparing a separate Project-Specific Analysis (PSA) for each of these projects. The PSAs identified mountain lion (*Puma concolor*) and ringtail (*Bassariscus astutus*) as species with potential to occur in both treatment areas and both species are assumed to be present in the treatment areas. Adverse effects on special-status wildlife species, including on mountain lion and ringtail, were considered at a program level in the CalVTP Program EIR. The PSAs for the proposed vegetation treatments document the site- and treatment-specific impacts on each special-status species with potential to occur in the treatment areas and includes project-level implementation guidance for applicable standard project requirements (SPRs) and mitigation measures from the CalVTP Program EIR.

Purpose of this Memo

This memo has been prepared to document compliance with Mitigation Measure BIO-2a of the CalVTP Program EIR for mountain lion and ringtail and facilitate consultation with California Department of Fish and Wildlife (CDFW). Implementation of Mitigation Measure BIO-2a is required for these projects because treatment would occur in areas assumed to be occupied by mountain lion, a candidate for listing under the California Endangered Species Act (CESA), and ringtail, a fully protected species under California Fish and Game Code. Mitigation Measure BIO-2a requires the RCD to consult with CDFW regarding avoidance of mortality, injury, and disturbance during treatment and the RCD's determination that habitat function for these species would be maintained after treatment implementation. A description of the proposed projects is attached (Attachment 1) and measures to avoid disturbance, injury, and mortality and an analysis of habitat function are provided below pursuant to Mitigation Measure BIO-2a. The RCD is seeking concurrence that disturbance, injury, or mortality would likely be avoided by use of these measures and that habitat function would be maintained. The outcome of this consultation will be summarized in the PSAs.

This memorandum specifically addresses mechanical treatments (e.g., use of masticators) and manual treatments that use power tools (e.g., chainsaws) because these activities have the greatest potential to result in disturbance, injury, or mortality of ringtail and mountain lion. However, other treatment activities, such as targeted herbicide application by hand-held devices, would be implemented to achieve project objectives, as described and analyzed in the PSAs.

Relevant Species Information

RINGTAIL

Ringtail is designated as a fully protected species under California Fish and Game Code Section 4700. Ringtails are not tracked in the CDFW California Natural Diversity Database (CNDDB), so occurrence data is limited to anecdotal accounts or limited publicly available survey data. Due to the presence of potentially suitable habitat, the presence of ringtail is assumed at both the Last Chance and Skylark Ranch treatment areas.

Ringtail is a nocturnal species and typically occurs in riparian areas, forests (including stands of various ages), and shrub habitats. Potential denning or resting habitat includes large hardwoods, large conifers, snags, rock outcrops, crevices, brush, and slash piles. While ringtails have been documented using these various substrates for denning, maternity dens are mostly located in cavities within large (i.e., greater than 18–20 inches diameter at breast height [dbh]) trees (Wyatt, pers. comm., 2021). The ringtail breeding season occurs from February through June but peaks in March and April. Gestation is approximately 51–54 days, and females typically give birth to two to four kits from late-April or May to June. Once the kits are mobile, female ringtails will move to different dens with the kits.

Mobile ringtails are likely to flee when disturbed and they can sense disturbance through vibrations (Wyatt, pers. comm., 2021). According to Wyatt (pers. comm. 2021), an individual ringtail is likely to flee from its den while resting, unless a female is denning with immobile kits during the first 3–4 weeks of life. If in maternity dens with immobile kits, ringtail mothers are likely to remain with their young in the den instead of fleeing. While adult ringtails are likely to flee in response to disturbance outside of the breeding season, ringtail kits are born altricial (e.g., blind, immobile) and would be incapable of fleeing for the first several weeks of their lives, and female ringtails would likely remain with the kits regardless of the disturbance stimulus.

Denning and foraging habitat including down logs for ringtail is present within both the Last Chance Road and Skylark Ranch treatment areas. While no suitable tree cavities were observed during the SPR BIO-1 survey, tree cavities may occur within the treatment areas. As the treatment areas recover from the 2020 CZU Lightning Complex, additional understory vegetation is likely to re-establish and provide additional habitat for the species. Heavy equipment used during mechanical treatments (e.g., masticators) and hand-operated power tools used during manual treatments (e.g., chainsaws) during maternity season (April 15-June 30) could, therefore, result in inadvertent destruction of a ringtail maternity den and injury or mortality of adult females and kits. Due to the nature of proposed herbicide treatment (i.e., targeted application by hand-held devices), it is unlikely to result in adverse effects on a den.

MOUNTAIN LION

The Southern California/Central Coast Evolutionarily Significant Unit (ESU) of mountain lion was granted candidate listing status by the California Fish and Game Commission under the California Endangered Species Act in April of 2020. CDFW is currently conducting a one-year status review, after which this ESU may be permanently listed as threatened. The proposed projects are located within the range of the Central Coast North subpopulation of the Southern California/Central Coast ESU.

Last Chance Road Forest Health Project. Mountain lions have been documented throughout the Santa Cruz Mountains, and the Last Chance Road Forest Health Project area occurs within modeled nursery habitat (Yovovich et al. 2020). However, when examined at a finer scale the treatment area itself is not likely to be used as nursery habitat due to the close proximity to Last Chance Road and associated human development (Yovovich pers. comm. 2021). In addition, the 2020 CZU Lightning Complex, burned any understory thickets that previously existed in the Last Chance treatment area that could be used for denning; however, denning habitat may occur adjacent (within 2,000 feet) to the treatment area in stands that may have been subject to a lower intensity burn during the 2020 CZU Lightning

Complex. Therefore, while it is unlikely that mountain lions would den within the treatment area, denning may occur close enough that denning lions could be disturbed by mechanized treatments, and manual treatments using chainsaws. This disturbance of denning lions could result in interrupted provisioning of cubs or movement of cubs to another den site, which could have adverse effects on the cubs if initiated by project activities rather than the mother on her own. Foraging mountain lions may use the treatment area during project implementation; however, work is not likely to occur during the period of dusk to dawn when mountain lions are most active. In addition, foraging mountain lions are also likely to avoid the area while treatments are actively being performed, due to increased noise from equipment.

Skylark Ranch Forest Health Project. The Skylark Ranch Forest Health Project occurs within the Skylark Ranch Girl Scout Camp in northern Santa Cruz County. Adult mountain lions have been observed on Skylark Ranch by camp personnel; however, the recreational uses of the camp make denning within and adjacent to the Skylark Ranch treatment area unlikely (Yovovich pers. comm. 2021). Foraging mountain lions may use the treatment area during project implementation; however, work would not occur during the period of dusk to dawn when mountain lions are most active. In general, foraging mountain lions are likely to avoid the area while treatments are actively being performed due to increased noise from equipment and due to the ongoing human disturbance associated with camp activities.

CalVTP Standard Project Requirements and Mitigation Measures with Project-Specific Implementation Guidance

The following presents relevant excerpts of Mitigation Measure BIO-2a from the CalVTP Program EIR. Following the excerpts, measures are refined to apply specifically to the Skylark Ranch and Last Chance Road Forest Health projects. These project-specific measures are consistent with CalVTP Mitigation Measure BIO-2a and identify tailored actions relevant to the site-specific conditions of the projects. Numerous other measures from the CalVTP Program EIR will also be implemented to protect biological resources, including SPR BIO-2 (Require Biological Resource Training for Workers), SPR BIO-12 (Protect Common Nesting Birds, Including Raptors), and several other measures to avoid erosion and protect special-status plants and sensitive natural communities. These measures will be included in the PSAs.

MITIGATION MEASURE BIO-2A: AVOID MORTALITY, INJURY, OR DISTURBANCE AND MAINTAIN HABITAT FUNCTION FOR LISTED WILDLIFE SPECIES AND CALIFORNIA FULLY PROTECTED SPECIES

Following is the excerpt from Mitigation Measure BIO-2a regarding impact avoidance, which is provided for context. Italics are added for emphasis.

Avoid Mortality, Injury, or Disturbance of Individuals

- The project proponent will implement one of the following two measures to avoid mortality, injury, or disturbance of individuals:

    1. Treatment will not be implemented within the occupied habitat. Any treatment activities outside occupied habitat will be a sufficient distance from the occupied habitat such that mortality, injury, or disturbance of the species will not occur, as determined by a qualified RPF or biologist using the most current and commonly-accepted science and considering published agency guidance; OR

    2. Treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-around, *CDFW and/or*

USFWS/NOAA Fisheries will be consulted to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species.

Project-Specific Mitigation Measure Refinements for Ringtail:

Outside of Maternity Season Avoidance Measure

During mechanical treatment activities and after the standard equipment warm-up period, heavy machinery activities will be conducted slowly and cautiously. For example, the head of a masticator will pause above a patch of heavy brush for several seconds before removing the brush, or a feller-buncher will pause next to a snag with a cavity before removing the snag. A qualified RPF or biologist will explain this process to contractors and will observe mechanical treatments on the first day of work to ensure that the methods are understood and implemented properly; this could be combined with other pre-activity survey or contractor awareness training requirements. Contractors will watch for ringtail as they masticate in heavy brush, or remove snags with cavities. If a ringtail is observed, the contractor will direct treatment activities to halt, and the ringtail will be allowed to leave the area unharmed before treatment begins. If a ringtail is observed outside of maternity season, the qualified RPF or biologist will be contacted and will perform a sweep of the treatment area before work resumes. If the qualified RPF or biologist observes a resting ringtail or active non-maternity den, treatment activities will not occur within that day's treatment area until the ringtail leaves the area on its own. If the qualified RPF or biologist observes a ringtail or confirms the contractor's observation (i.e., based on contractor description or photograph), the occurrence will be reported to CDFW.

Maternity Season Den Surveys and Biological Monitoring

To avoid disturbance, injury, or mortality of adult ringtails and kits, the following measures will be implemented when mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws) are implemented during the maternity season (April 15–June 30) for the Skylark Ranch and Last Chance Road Forest Health projects. The measures below were developed with input from David Wyatt, a professor in the biology department at Sacramento City College, and recognized ringtail expert. David has been studying ringtails in California for over 30 years.

- Den Surveys. Within 7 days prior to the start of mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws) during the ringtail maternity season, a qualified RPF or biologist will conduct a den search in the treatment area to be treated the next week. The qualified RPF or biologist will search for large trees (i.e., greater than 12 inches dbh) with appropriate cavities (i.e., holes larger than 3 inches in diameter, cavities extending approximately 12 inches down from the cavity hole). If found, the qualified RPF will inspect the cavity using a cell phone with a flash, or other tools (e.g., borescopes) to determine whether ringtails are present. Areas (e.g., large trees) with appropriate den habitat, occupied or not, will be marked (i.e., with flagging, spray paint), for inspection during future sweeps (as described below). The qualified RPF or biologist will also search for dens in dense brush habitat and will note any sightings of fleeing adult ringtails.
    - Active Dens. If active ringtail dens are discovered during a den survey or daily sweep, a no-disturbance buffer of at least 0.25 mile will be implemented around the den, and mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws) will not proceed within the buffer until at least the end of the ringtail maternity season (June 30). The qualified RPF or biologist will confirm that the den is unoccupied before treatment activities resume. The 0.25-mile buffer would incorporate the den and an area greater than the typical ringtail home range in northern California (Wyatt, pers. comm., 2021). If an active den is discovered, CDFW will be notified of the den and buffer location. CDFW will be provided an opportunity to visit the site and provide technical information on the size and shape of the den buffer.

- Daily Sweeps. If active ringtail dens are not discovered, the following measures will be implemented to avoid inadvertent destruction of active dens that eluded detection during the den search as well as injury or mortality of adult ringtails and kits.
    - Daily Sweeps. On the first morning of work for mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws), a qualified RPF or biologist will conduct a sweep of the area to be treated that week and will search all habitat suitable for ringtails where mastication or tree removal will occur that day (i.e., larger trees, heavy brush, rock piles) for active dens or adults, including the trees with cavities previously marked by the qualified RPF or biologist. On following days, a trained contractor will search all areas previously marked by the qualified RPF or biologist for active dens (see training requirements below under "Training and Monitoring"). If an active den is discovered during a daily sweep, the qualified RPF or biologist will be notified, all work will stop, a no-disturbance buffer of at least 0.25 mile will be implemented around the den, and the requirements described above under "Active Dens" will be followed.

Project-Specific Implementation Guidance for Mountain Lion:

To avoid disturbance, injury, or mortality of adult mountain lions and cubs, the following measures will be implemented when mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws) are implemented for the Last Chance Road Forest Health Project. The measures below were developed with input from local mountain lion experts Veronica Yovovich (UC Berkeley Postdoctoral Scholar and Panthera Conservation Scientist) and Chris Wilmers (UC Santa Cruz Professor).

Nursery Surveys, Monitoring, and Avoidance

- **Detailed Habitat Analysis**. Nursery habitat suitable for the species will be determined through desktop analyses (e.g., review of land cover, slope, distance from development), coordination with local experts studying or tracking the species (if available), and field surveys. Potential mountain lion dens will include caves, large natural cavities within rocky areas, or thickets deemed appropriate for use by mountain lions based on size and other characteristics (e.g., proximity to human development, surrounding habitat) (Yovovich, pers. comm., 2020). The qualified wildlife biologist will survey for signs of mountain lion (e.g., tracks, scat, prey items such as a fresh kill) in the vicinity of potential nursery habitat to help determine whether the area may contain a mountain lion nursery. If nursery habitat is confirmed adjacent to (within 2,000 feet of) the Last Chance Road Forest Health Project treatment area, the following additional measures will be applied. If nursery habitat is not identified adjacent to the Last Chance Road Forest Health Project treatment area, no additional measures will be required.
- **Nursery Surveys.** Within 7 days before commencement of treatment activities, a qualified wildlife biologist with familiarity with mountain lion and experience using survey methods for the species will conduct focused surveys in nursery habitat suitable for the species adjacent to (within 2,000 feet of) the Last Chance Road Forest Health Project site to identify any potential mountain lion nurseries.
    - Within 7 days prior to the start of mechanical treatments and manual treatments that use hand-operated power tools (e.g., chainsaws), a qualified RPF or biologist will inspect suitable nursery habitat in the part of the treatment area scheduled to be treated the following week for mountain lion or signs of mountain lion nurseries. If no mountain lion or sign of a nursery is observed, treatment activities may begin. If signs of a mountain lion nursery are observed, further investigation will be required to determine if a mountain lion nursery is present (see below).
    - If signs of a mountain lion nursery are found during surveys, further investigation will be required to determine if a mountain lion nursery is present. No treatment will occur in the area while further investigation is occurring. Survey methods will include the use of trail cameras, track plates, hair snares, and/or other noninvasive methods, as well as coordination with local experts tracking the species (if available). Surveys using these noninvasive methods will be conducted for three days and three nights to determine whether a nursery may be present.
- **Nursery Avoidance.** If a nursery is known to occur in the area or further signs of a nursery are detected based on the surveys described above (e.g., lactating adult females or cubs on camera, repeated detections of an adult female in the area, growls or calls from cubs), the RCD will implement a no-disturbance buffer of at least 2,000 feet (Wilmers et al. 2013) for a minimum of 10 weeks. Treatment activities will not occur within this buffer during this time to avoid disturbance, injury, or mortality of mountain lion nurseries.

MITIGATION MEASURE BIO-2A: AVOID MORTALITY, INJURY, OR DISTURBANCE AND MAINTAIN HABITAT FUNCTION FOR LISTED WILDLIFE SPECIES AND CALIFORNIA FULLY PROTECTED SPECIES

Following is the excerpt from Mitigation Measure BIO-2a regarding habitat function, which is provided for context. Italics are added for emphasis.

Maintain Habitat Function

- The project proponent will design treatment activities to maintain the habitat function, by implementing the following:
  - While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; dens; tree snags; large raptor nests [including inactive nests]; downed woody debris; food sources). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science.
  - If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that listed or fully protected wildlife with specific requirements for high canopy cover (e.g., Humboldt marten, fisher, spotted owl, coastal California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained.
- A qualified RPF or biologist of the lead agency will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. *Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained.* If the lead agency determines after consultation that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.

RCD Determination Regarding Maintenance of Habitat Function

The RCD has determined that habitat function for ringtail and mountain lion will be maintained after implementation of the Skylark Ranch and Last Chance Road Forest Health projects based on the rationale explained below.

Last Chance Road Forest Health Project

Project implementation within the Last Chance treatment area would include the following vegetation removal standards that would result in protection of ringtail maternity den and foraging habitat and mountain lion foraging habitat:

- Retention of native live vegetation greater or equal to 8 inches dbh;
- Retention of logs greater than 12 inches dbh with preference for retaining the largest logs and those with cavities, for a total retention of approximately 10 tons per acre on average;
- Retention of snags greater than 12 inches dbh at an average density of 1-2 per acre. Preference will be given to retaining the largest trees and trees with cavities, that are not hazard trees; and

- Native shrub retention
    - No removal of riparian species (e.g., elderberry).
    - In forested habitats space shrubs between 25-50 feet for each species occurrence, where shrub crown is approximately 10-15 feet wide. Spacing may be closer than 25 feet on level ground and greater than 50 feet on steeper ground or near structures.

The potential denning and foraging habitat for ringtail and foraging habitat for mountain lion within the Last Chance Road treatment area was substantially altered by the 2020 CZU Lightning Complex. The fire resulted in between 60 and 100 percent tree mortality and killed and removed much of the understory vegetation. Removal of standing dead trees and dead understory vegetation during Phase I treatments within the Last Chance Road treatment area would not substantially alter the post-fire habitat within the treatment area for ringtail and mountain lion because the retention of large down logs and snags, including those with cavities, and 35 percent of existing shrub cover would maintain denning and foraging habitat for ringtail within the treatment area.

After several years of post-fire vegetation growth and regeneration, there would likely be an increase in cover for denning ringtail and forage for ringtail and mountain lion prey species when compared to existing conditions. The retention of sufficient shrub cover, down wood, and snags during Phase II and maintenance treatments would maintain denning and foraging habitat for ringtail and stalking and foraging habitat for mountain lion after implementation. Phase II and maintenance treatments would result in reduced understory vegetation when compared to pre-fire conditions, but would maintain habitat function for both ringtail and mountain lion.

Overall, denning and foraging habitat for ringtail and foraging habitat for mountain lion within treatment areas would not be substantially reduced. The treatment area is along an existing road and is adjacent to large areas of natural vegetation; treatments are not expected to hinder movement of ringtail or mountain lion or result in landscape-scale modifications. For these reasons, the RCD has determined that habitat function for ringtail and mountain lion would be maintained after implementation of the Last Chance Road Forest Health Project.

Skylark Ranch Forest Health Project

Project implementation within the Skylark Ranch treatment area would include the following vegetation removal standards that would result in protection of ringtail maternity den habitat and mountain lion foraging habitat:

- Retention of native live vegetation greater than 12 inches dbh;
- Retention of logs greater than 12 inches with preference for retaining the largest logs and those with cavities, for a total retention of approximately 10 tons per acre on average;
- Retention of snags greater than 12 inches dbh at an average density of 1-2 per acre. Preference will be given to retaining the largest trees and trees with cavities, that are not hazard tree;
- Native shrub retention
    - No removal of riparian species (e.g., elderberry);
    - In forested habitats space shrubs between 25-50 feet for each species occurrence, where shrub crown is approximately 10-15 feet wide. Spacing may be closer than 25 feet on level ground and greater than 50 feet on steeper ground or near structures; and
    - Retain a minimum of 35% relative cover of existing shrubs within chaparral and coastal scrub habitats, maintaining a diversity of understory species.

The potential habitat for both ringtail and mountain lion within the Skylark Ranch treatment area was substantially altered by the 2020 CZU Lightning Complex. The fire resulted in an approximately 100 percent reduction in cover within knobcone pine and coastal scrub habitats. Initial treatment within knobcone pine coastal scrub habitat would

not substantially change the existing post-fire condition as little existing tree or shrub cover remains to be removed, and regeneration is not anticipated to increase cover substantially before initial treatments are implemented. However, in the area occupied by knobcone pine prior to the fire, the manzanita may be the dominant vegetation for many years while knobcone pines more slowly reestablish, resulting in a seral-stage chaparral community. Future maintenance treatments within chaparral and coastal scrub habitats would retain a minimum of 35 percent of shrub cover. Furthermore, the treatment area when compared to the total area of coastal scrub and potential future chaparral habitat within the Skylark Ranch property is relatively small. Maintenance treatments would therefore result in preservation of cover for ringtail denning and foraging and mountain lion hunting in coastal scrub and potential future chaparral habitats.

Across all other habitat types within the Skylark Ranch treatment area, fire effects were variable, ranging from understory burning, which left redwood canopies and some shrubs intact, to areas of 100 percent tree and shrub mortality. The retention of a portion of existing shrub cover and retention of logs and snags that may provide cavities for denning would provide denning habitat for ringtail and foraging habitat for both ringtail and mountain lion after initial treatment. As the understory reestablishes after the fire, maintenance treatments would result in reduced percentage in cover of understory vegetation when compared to pre-fire conditions. However, the remaining vegetation would be at a density that would result in a more diverse and healthier understory, which would improve habitat conditions overall. In addition, the project would maintain sufficient shrub cover, down wood, and snags to provide denning habitat for ringtail and foraging habitat for both ringtail and mountain lion.

Overall, denning and foraging habitat for ringtail and foraging habitat for mountain lion within treatment areas would not be substantially reduced. The treatment area is small relative to adjacent areas of natural vegetation; treatments are not expected to hinder movement of ringtail or mountain lion or result in landscape-scale modifications. For these reasons, the RCD has determined that habitat function for ringtail and mountain lion would be maintained after implementation of the Skylark Ranch Forest Health Project.

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Attachment 1

Project Descriptions for the Last Chance Road and Skylark Ranch Forest Health Projects

PROJECT DESCRIPTION FOR LAST CHANCE ROAD FOREST HEALTH PROJECT

The Last Chance Road Forest Health Project (project or proposed project) consists of vegetation treatments in the vicinity of Last Chance Road, immediately east of State Route (SR) 1 and approximately 22 miles southeast of the community of Pescadero and 21 miles northwest of the City of Santa Cruz (refer to Figure 1-1). The CalVTP treatments would occur within a 60-acre treatment area in Santa Cruz County. The vegetation treatments are intended to reduce potential vegetative ignition sources, improve the forest's health and vigor, and improve the capacity for emergency response and wildfire suppression during a wildfire.

The CalVTP treatment types that would be implemented are ecological restoration and a shaded fuel break, and the proposed treatment activities to implement the project are manual and mechanical treatments and herbicide application.

The proposed project is within the 2020 CZU Lightning Complex burn area and tree mortality in the treatment area varies between 60 and 100 percent depending on the species. Thus, the project has two distinct phases, the first phase would focus on the removal of trees that are a public safety hazard, dead or dying, irreversibly diseased, severely damaged, or and invasive species. Phase II would treat successional vegetation (i.e., naturally regenerating Monterey pine, future understory fuels, and invasive species) to restore ecosystem processes, conditions, and resiliency, as well as implement a 20-acre shaded fuel break treatment along Last Chance Road. Each phase of the proposed project is described in more detail below.

1.1 PHASE I CalVTP TREATMENT TYPES

The proposed Phase I CalVTP treatments would occur throughout the entire 60-acre treatment area. The Phase I treatment area is shown in Figure 1-2 and the CalVTP treatment type and activities that would be used to implement Phase I are summarized in Table 1-1.

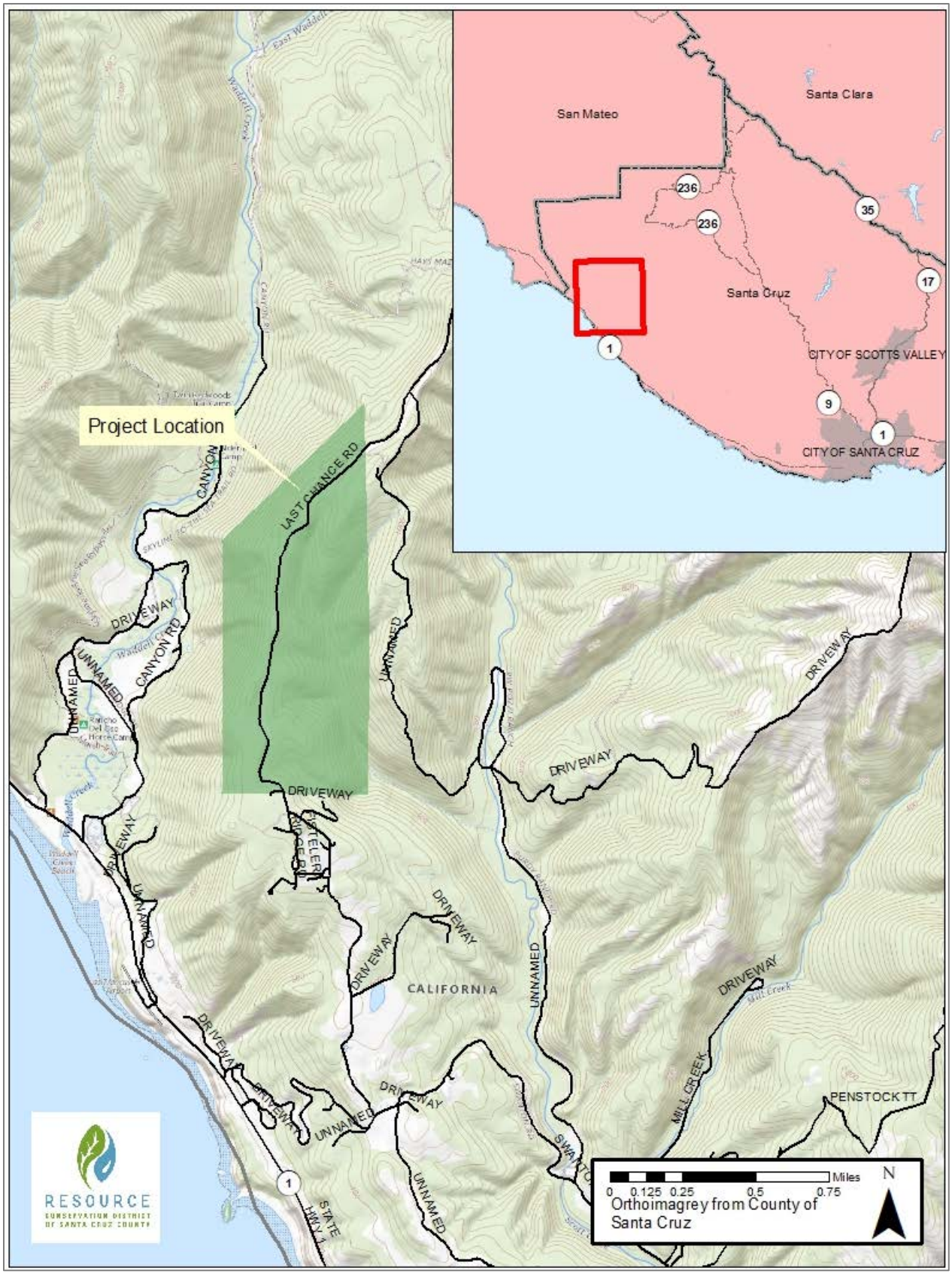
Table 1-1 Proposed Phase I CalVTP Treatments

CalVTP Treatment Type	Treatment Description	CalVTP Treatment Activity	Treatment Size (acres)	Equipment Used for Treatments	Timing of CalVTP Treatments
Ecological Restoration	Habitat improvement/fire resiliency treatments	Mechanical (cutting, limbing)	60	Feller buncher, skid steer, chipper (for chipping biomass)	May 2022 – August 2022
Total Acres			60		

Source: Provided by Santa Cruz RCD in 2021

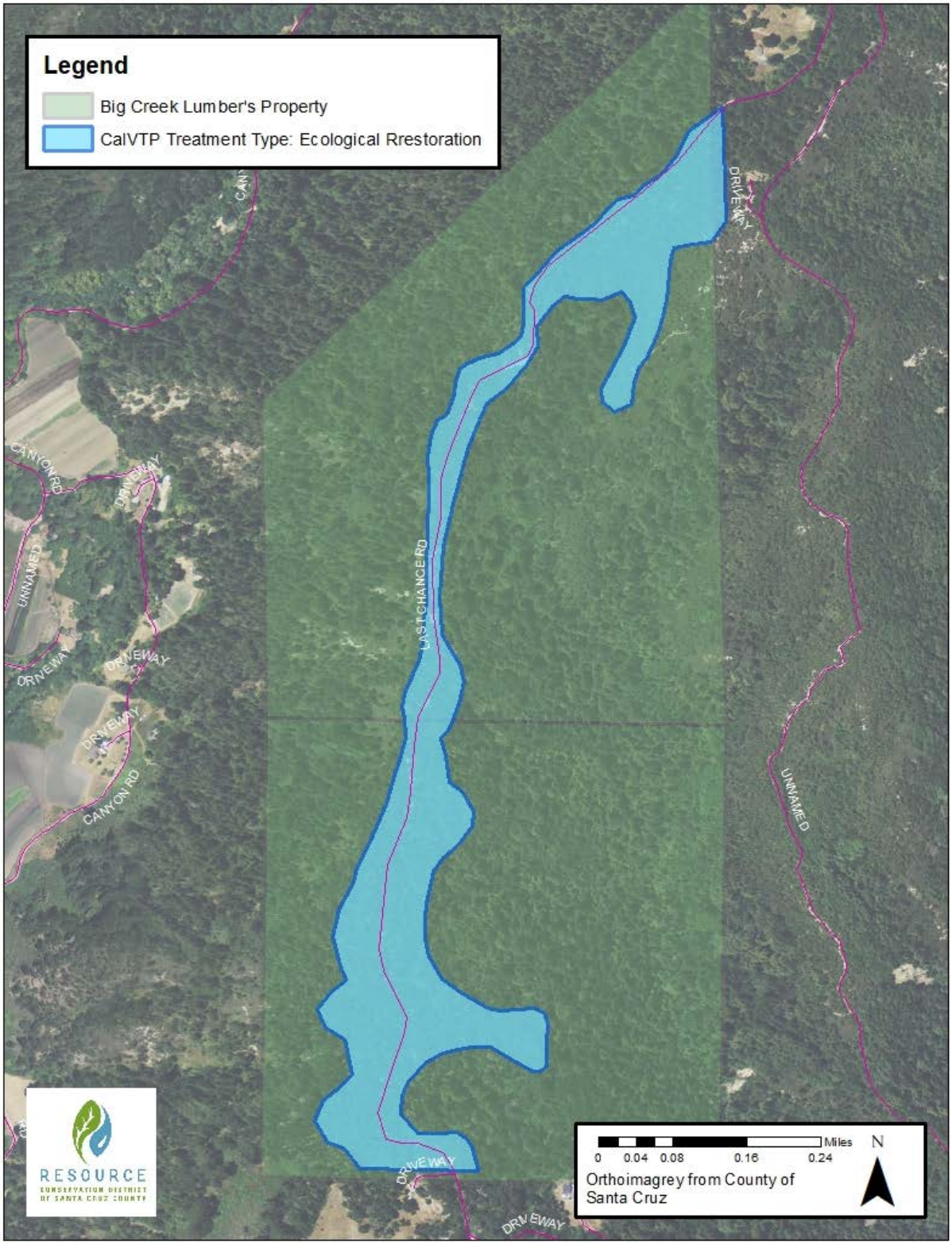
A feller buncher and skid steer would be used to remove dead or downed material; hazard trees; dead, dying, or diseased trees; and understory vegetation if appropriate. Trees removed would be limbed and topped, and boles (i.e., tree trunks) would be decked in the treatment area in strategic locations away from the road to reduce visibility from the road and fire fuel hazards along roadways. The CalVTP treatment activities that would be used to implement these treatment types are described in more detail below in Section 1.3, "CalVTP Treatment Activities."

Initial treatments are estimated to occur over approximately 40 days, beginning in May 2022. However, the timeframe may change in the event of delays, such as weather. Treatment crews would consist of up to 10 people working at any one time. Treatment vehicle and equipment staging would occur within the designated treatment area and within pullouts along Last Chance Road. All work would occur during daytime hours.



Source: Provided by Santa Cruz RCD in 2021

Figure 1-1 Project Location



Source: Provided by Santa Cruz RCD in 2021

Figure 1-2 Phase I CalVTP Treatments

1.1.1 Phase I Ecological Restoration

The vegetation treatment area has experienced a range of burn severities, from low to high, during the 2020 CZU Lightning Complex. The proposed project would implement ecological restoration treatments for the dual purpose of wildfire risk reduction and enhancement of natural habitats, particularly given the burned condition of much of the landscape. Consistent with the CalVTP ecological restoration treatment type, the RCD's proposed ecological restoration treatments would seek to return the landscape closer to natural conditions where natural fire processes can be reestablished and habitat quality can be improved, including controlling and eliminating nonnative, invasive plants and excess buildup of fire fuel. Specific restoration objectives include restoring the natural ecosystem processes, conditions, and resiliency through the removal of the degrading overstory of standing dead, dying, and diseased woody vegetation and any present invasive species.

Ecological restoration treatments would occur over the full 60-acre treatment area and would be implemented using mechanical treatment methods, including equipment such as feller bunchers and skid steers to remove dead, dying, and diseased trees and invasive species. Implementing ecological restoration treatments would result in a modification of existing fuels that would provide ideal conditions for the natural recruitment of Monterey pine, while reducing fuel loads to protect the regeneration of native vegetation and restore habitat conditions including, but not limited to habitat quality and natural fire processes. Ecological restoration treatments would focus on removing dead, dying, and diseased vegetation and some understory vegetation to increase the site's carrying capacity for stand volume, which in turn would increase the growth and vigor of any remaining live trees.

The excessive buildup of vegetation and dead and dying material following the 2020 CZU Lightning Complex has degraded conditions in the treatment area. Removing dead, dying, and diseased trees is expected to increase the growth and carbon storage capacity in the residual stand.

1.2 PHASE II CalVTP TREATMENT TYPES

The proposed Phase II CalVTP treatments would also occur throughout the entire 60-acre treatment area. The Phase II treatment area is shown in Figure 1-3 and the CalVTP treatment types and activities that would be used to implement Phase II are summarized in Table 1-2.

Table 1-2 Proposed Phase II CalVTP Treatments

CalVTP Treatment Type	Treatment Description	CalVTP Treatment Activity	Treatment Size (acres)	Equipment Used for Treatments	Timing of CalVTP Treatments
Ecological Restoration	Habitat improvement/fire resiliency treatments	Manual, mechanical, herbicide use (cutting, masticating, cut stump or foliar spray of herbicides, planting)	33	Chainsaws and/ or other mechanized hand tools, masticator, chipper, herbicide applicator	2-5 years after Phase I
Shaded Fuel Break	Treatment of heavy brush along Last Chance Road	Manual, mechanical, herbicide use (cutting, masticating, cut stump or foliar spray of herbicides, biomass chipping)	27	Masticator, chipper, chainsaws, herbicide applicator	2-5 years after Phase I
Total Acres			60		

Source: Provided by Santa Cruz RCD in 2021

A masticator (mulcher) would be utilized to remove understory vegetation; dead or downed material; hazard trees; dead, dying, and diseased trees; and thin live trees up to 8 inches diameter at breast height (dbh) where tree density is too high. Manual treatment crews would utilize chainsaws and/or other various hand mechanized or hand tools to prune trees and woody vegetation; buck downed debris and materials; and to

remove dead, dying, and diseased trees of any diameter, and live trees up to 8 inches dbh. Herbicide application may be utilized to eliminate the spread and re-sprouting of invasive species in the treatment areas predominately along roads and trails. The CalVTP treatment activities that would be used are described in more detail below in Section 2.3, "CalVTP Treatment Activities."

The timeframe for implementation of Phase II is dependent on securing future funds and the rate of vegetative regeneration, but would likely occur within two to five years after completion of Phase I treatments. The treatment area would be monitored after implementation of Phase I treatments to determine when Phase II treatments would benefit the area, and to confirm that site conditions and the anlaysis is this PSA are still relevant. Treatment crews would consist of up to 10 people working onsite at any one time. Treatment vehicle and equipment staging would occur within the designated treatments areas and within pullouts along Last Chance Road. All work would occur during daytime hours.

1.2.1 Phase II Ecological Restoration

As the second phase of treatment, the project proponent would treat the naturally regenerating Monterey pine, successional understory fuels, and invasive species in areas outside of the WUI to enhance the ecosystem processes, conditions, and resiliency, and to create healthy tree densities and increase survivorship within a 33-acre portion of the treatment area. This is consistent with the description of the CalVTP ecological restoration treatment type, as defined in the PEIR (CalVTP Final PEIR Volume II page 2-7 and pages 2- 15 and 2-16). Implementing the treatment activities would encourage ideal growing conditions for the endemic Monterey pine, and would modify understory vegetation densities to provide adequate habitat and restore natural fire processes.

The treatment area supports one of three endemic stands of Monterey pine within California. Before the CZU Lightning Complex Fire encroaching Douglas fir was inhibiting seedling growth and natural regeneration of the Monterey pine stand. Following the CZU Lightning Complex Fire, the existing Monterey pine seedbank was given an opportunity to reoccupy this hillside. Monterey pine cones are serotinous, requiring heat to release the seeds. Typically, and under natural a fire return regime, Monterey pine regenerates in a manner that results in overstocking. In the absence of fire, or other natural disturbance event, successional saplings require selectively thinning within the stand and treatment of the understory vegetation to mimic natural low-severity, ground fires that would create ideal vegetation density to create favorable conditions for Monterey pine forest conditions.

Future desired conditions are 150 to 300 trees per acre, with few to no crowns interlocking, and a managed understory without presence of ladder fuels. Ecological restoration would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, and chippers. Herbicides may also be used to prevent the growth of or remove invasive vegetation.

1.2.2 Phase II Shaded Fuel Break

This project also proposes to create a 27-acre shaded fuel break treatment along Last Chance Road that would prevent or slow the spread of future wildland fires to structures and surrounding natural resources (see Figure 1-3). As defined in the CalVTP PEIR, fuel breaks remove zones of vegetation to support fire suppression efforts and passively interrupt the path of a fire (CalVTP Final PEIR Volume II Section 2.5.1 page 7 and page 11-14). The shaded fuel break would provide emergency responders an opportunity to control or contain wildfires through the modification of flammable vegetation while supporting a healthy and fire resilient residual forest stand through retaining the majority of the overstory canopy to maintain the shade that would reduce the potential for rapid re-growth of understory vegetation. The area within which the shaded fuel break would be created was burned in the CZU Lightning Complex Fire. Dead, dying, and hazard trees would be removed from this area in Phase I of treatment. In Phase II, successional vegetation along the

road would be managed as it establishes to facilitate the selective growth of certain vegetation that would comprise a shaded fuel break. The creation of this shaded fuel break would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, and chippers. Herbicides may also be used to prevent the growth of invasive vegetation.

1.3 CalVTP TREATMENT ACTIVITIES

Mechanical treatment activities would be implemented in Phase I. Mechanical, manual, and herbicide treatment activities would be implemented for Phase II. Each of these activities are described in more detail below; phases are not distinguished in the descriptions below because the activities would be the same for both phases, as applicable.

1.3.1 Mechanical Vegetation Treatment – Phase I and II

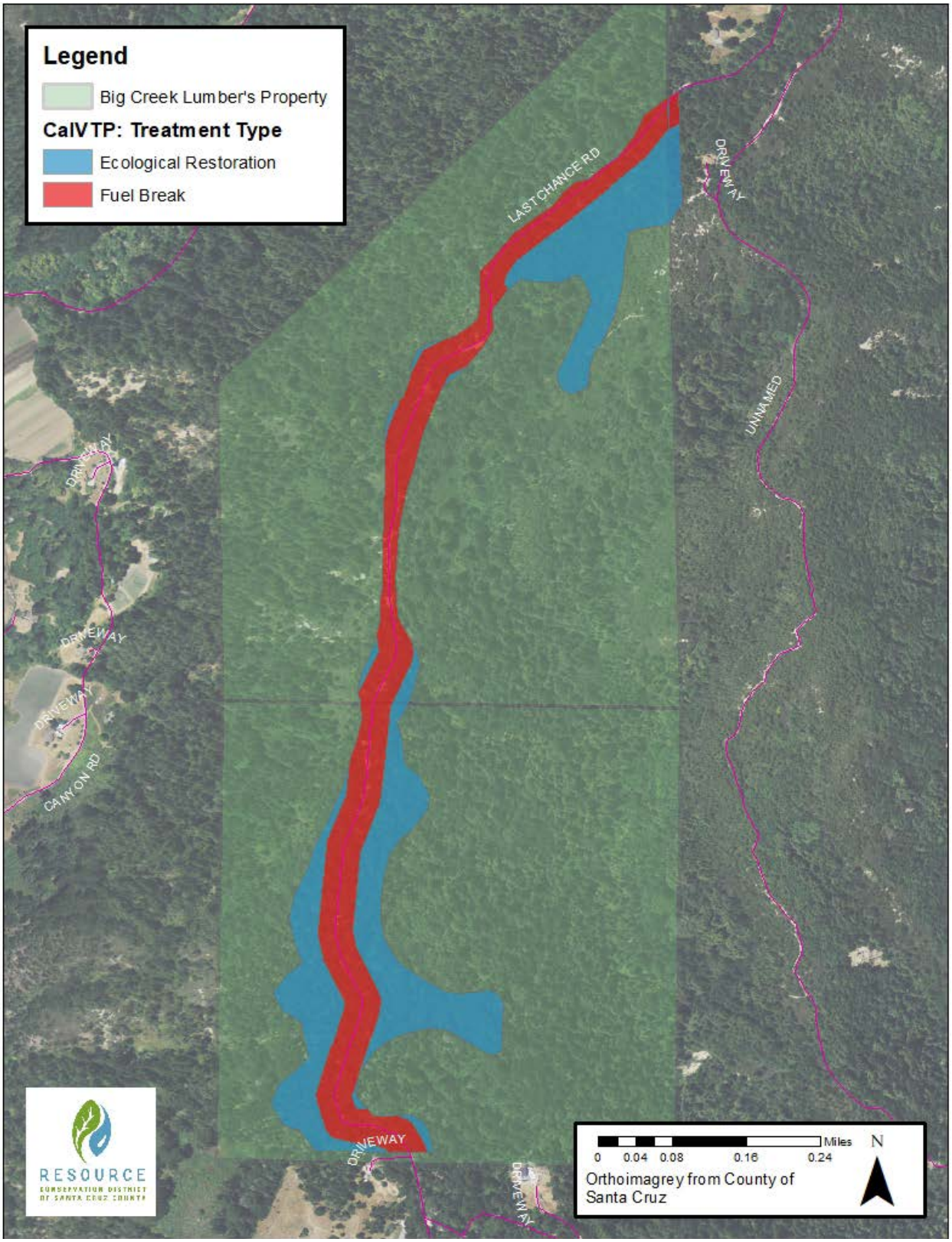
Mechanical treatments would occur on up to the full 60 acres proposed for treatment and would primarily include skidding, masticating, and chipping target vegetation. Mechanical treatment activities would occur predominately on slopes less than 40 percent, along ridges, and potentially also on slopes greater than 40 percent by using equipment that can reach target vegetation from existing road infrastructure. Masticators would be used to remove dense stands of understory vegetation and ladder fuels and maintain a healthy overstory. As stated in the CalVTP PEIR Section 2.5.2, mechanical treatments may cut, uproot, crush/compact, or chop existing vegetation through the use of masticators and other methods of application. Understory vegetation, brush, and shrubs under the drip lines of trees shall be cut and masticated leaving root systems intact for resprouting. Understory debris would be chipped and scattered onsite within the treated areas, following best management practices for reducing the spread of pests, disease, and invasive species (see Section 1.6, "Pests, Disease, and Invasive Species" below).

Generally, mechanical treatments would:

- remove dead and dying vegetation;
- remove invasive trees, all sizes (e.g., Eucalyptus); and
- remove or masticate target vegetation 8 inches dbh or less.

1.3.2 Manual Vegetation Treatment – Phase II

Manual treatments would be implemented on at least 10 acres and could be used on up to the full 60 acres (i.e., where manual and mechanical treatments would be used in combination). To implement manual treatments, hand tools and hand-operated power tools, including chainsaws, would be used to cut, clear, or prune herbaceous or woody species and ladder fuels. Manual treatments would occur predominately on slopes less than 40 percent; however, some manual treatments would occur on steep sleeps between approximately 40-50 percent. The same general guidelines for tree and vegetation removal and retention would be followed as described above for mechanical treatments.



Source: Provided by Santa Cruz RCD in 2021

Figure 1-3 Phase II CalVTP Treatments

1.3.3 Herbicide Application – Phase II

Herbicides would be used as a potential ongoing maintenance tool to control invasive species, and could be used within the entire 60-acre treatment area. Following best management practices for invasive species, specifically French broom (*Genista monsperssulana*), herbicides may be applied when manual removal methods are not a viable or effective option. Consistent with the CalVTP (CalVTP Final PEIR Volume II Section 2.5.2 page 2-27 to 2-28), the herbicides proposed for use are glyphosate and triclopyr and would only be applied directly by hand via cut stump treating or targeted foliar spray on monoculture stands. Herbicide application would 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. In addition, both glyphosate and triclopyr are subject to the California Red-Legged Frog Injunction (Center for Biological Diversity v. U.S. EPA [2006] Case No. 02-1580-JSW), and therefore, specific application requirements apply. For localized spot treatments using handheld devices on roadsides and in forests, the application of glyphosate and triclopyr are prohibited within 60 feet of California red-legged frog aquatic breeding critical habitat or non-breeding aquatic critical habitat within critical habitat areas or within 60 feet of aquatic features within the non-critical habitat sections subject to the injunction. The RCD would comply with all laws and regulations governing the use of herbicides.

1.4 BIOMASS DISPOSAL

After treatment, some biomass would remain onsite as decked logs, other biomass would be disposed of through mastication of material, chipping, and in some locations, and lopping and scattering; all biomass would remain onsite.

1.4.1 Phase I Biomass Disposal

The proposed mechanical vegetation treatments that would occur during Phase I would limb and top large woody vegetation, chipping the removed material and decking the boles (i.e., stacking the tree trunks). Chips would be spread over the treatment area and would not exceed 6 inches in thickness. Decked boles would be located within the treatment area and in strategic locations away from the road to minimize visibility. The landowner would process the boles in the future.

1.4.2 Phase II Biomass Disposal

The proposed Phase II mechanical vegetation treatments would mulch much of the vegetative debris using masticators and place it on the ground concurrently with vegetation removal. Biomass generated from treatments would primarily be disposed of by chipping and spreading on site (95 percent of biomass). Chipped biomass would be spread over the treatment area and would not exceed 6 inches in thickness. The remaining biomass (approximately 5 percent) would be lopped and scattered within the treatment areas.

1.5 TREATMENT MAINTENANCE

Maintenance treatments are expected to occur on an annual basis by the landowners. Periodic maintenance would occur as needed, determined by qualified staff who would monitor the project. Following Phase I initial treatment, site conditions are expected to resemble a meadow-like setting, with recovering vegetation returning following the CZU Lightning Complex Fire, allowing for space for the naturally regenerating Monterey pine to acquire the available nutrients, water, and sunlight. Following Phase II implementation, site conditions are expected to have a clear, open understory, free of ladder fuels, with adequate spacing between the individual Monterey pines that would promote a healthier, more vigorous forest. An open understory would create a mosaic of fuel continuity that would support wildlife habitats and the regeneration

of native species. Maintenance intervals would be dependent on the reestablishment rate of the understory species and would be triggered by the occurrence of dense, continuous understory and ladder fuels. Maintenance treatments would be conducted through the implementation of mechanical and manual treatments to treat hazard trees, understory vegetation and ladder fuels, and reduce the re-establishment of invasive species. Herbicides may also be used to treat invasive species if needed, as described under Section 1.3.3, "Herbicide Application – Phase II" above. All maintenance treatments would occur during daytime hours.

1.6 PESTS, DISEASE, AND INVASIVE SPECIES

The pathogen, *Phytophthora ramorum*, commonly referred to as Sudden Oak Death (SOD), infects coastal forests throughout California and Oregon and kills susceptible species including tanoak, coast live oak, California black oak, Shreve's oak, canyon live oak, and madrone saplings. Host species that are in the treatment area include, but are not limited to California bay laurel, coast redwood, and Douglas fir. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, all hand equipment and boots worn by treatment crews would be sanitized and heavy equipment hosed off before operations in areas where the spread of SOD is possible. The California Oak Mortality Task Force website contains additional information regarding treatment and disposal measures for plants infected with SOD, which would be monitored for changes in SOD treatment recommendations (http://www.suddenoakdeath.org/).

The fungal disease, *Fusarium circunatum*, commonly referred to as Pitch canker, affects many pine species and can infect Douglas fir. Most pines native to California are susceptible to pitch canker, but Monterey pine is the most widely affected host. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, the same measures as described above to prevent the spread of SOD would be implemented. The Pitch Canker Task Force has additional information regarding treatment and guidelines for handling woody material infected by pitch canker fungus, which would be monitored for changes in pitch canker treatment recommendations (https://ufei.calpoly.edu/pitch-canker-task-force/).

French broom is a problematic invasive species due to its ignitability, ability to carry fire into tree canopies, shading out seedlings, and replacing the native plants and forage species. This species has a large seed bank and re-sprouts readily from the root after cutting, freezing, and fire. The California Invasive Plant Council (Cal IPC) recommends pulling French broom to remove the entire plant including its roots to eliminate re-sprouting. The removal of this species is a priority due to its increased fire hazard and adverse impacts to habitat and aesthetics. Additional information about French broom control and treatments is located on the Cal IPC website, which would be monitored for changes in French broom treatment recommendations (https://www.calipc.org/plants/profile/genista-monspessulana-profile/ and https://wric.ucdavis.edu/information/natural%20areas/wr_G/Genista.pdf).

PROJECT DESCRIPTION FOR THE SKYLARK RANCH FOREST HEALTH PROJECT

The Skylark Ranch Forest Health Project (project or proposed project) consists of vegetation treatments at Skylark Ranch Girl Scout Camp (Skylark Ranch) in western Santa Cruz County. It is located approximately 2.5 miles east of State Route (SR) 1, 14.5 miles southeast of the city of Pescadero, and 26.6 miles northwest of the city of Santa Cruz (refer to Figure 1-1). The CalVTP treatments would occur within multiple treatment areas totaling 60 acres, all of which are within Santa Cruz County. The vegetation treatments are intended to reduce potential vegetative ignition sources, improve the forest's health and vigor, and improve the capacity for emergency response and wildfire suppression during a wildfire.

The CalVTP treatment types that would be implemented are ecological restoration and shaded fuel breaks, and the proposed treatment activities to implement the project are manual and mechanical treatments and herbicide application. The proposed CalVTP treatment areas are shown in Figure 1-2 and are summarized in Table 1-1, below.

Table 1-1 Proposed CalVTP Treatments

CalVTP Treatment Type	Treatment Description	CalVTP Treatment Activity	Treatment Size (acres)	Equipment Used for Treatments	Timing of CalVTP Treatments
Ecological Restoration	Habitat improvement/fire resiliency treatments	Manual and mechanical (cutting and masticating), and cut stump or foliar spray of herbicides	40	Chainsaws and/ or other mechanized hand tools, masticator, feller-buncher, skid steer, chipper (to chip biomass)	May 2022 – August 2022
Shaded Fuel Break	Treatment of areas along Old Woman's Creek Road and access roads with heavy brush	Manual and mechanical (cutting, masticating, and mowing), and cut stump or foliar spray of herbicides	20	Masticator, feller-buncher, skid steer, chainsaws, chipper (to chip biomass)	May 2022 – August 2022
Total Acres			60		

Source: Provided by Santa Cruz RCD in 2021

A masticator, feller-buncher, skid steer as well as chainsaws and other hand-held tools would be utilized to remove understory vegetation; dead or downed material; hazard trees; dead, dying, and diseased trees; and live trees up to 12 inches diameter at breast height (dbh). Manual treatment crews would also utilize chainsaws and other hand-held tools to prune trees and woody vegetation and buck downed debris and materials. All material would be masticated or chipped, described in section 2.3, "Biomass Disposal," below. Herbicide application may be utilized to eliminate the spread and re-sprouting of invasive species in the treatment areas predominately along roads and trails.

Initial treatments would occur over approximately 40 days, beginning in May 2022. However, the timeframe may change in the event of delays, such as weather. Treatment crews would consist of up to 10 people working within the treatment area at any one time. Treatment vehicle and equipment staging would occur within the designated treatment area. All work would occur during daytime hours.

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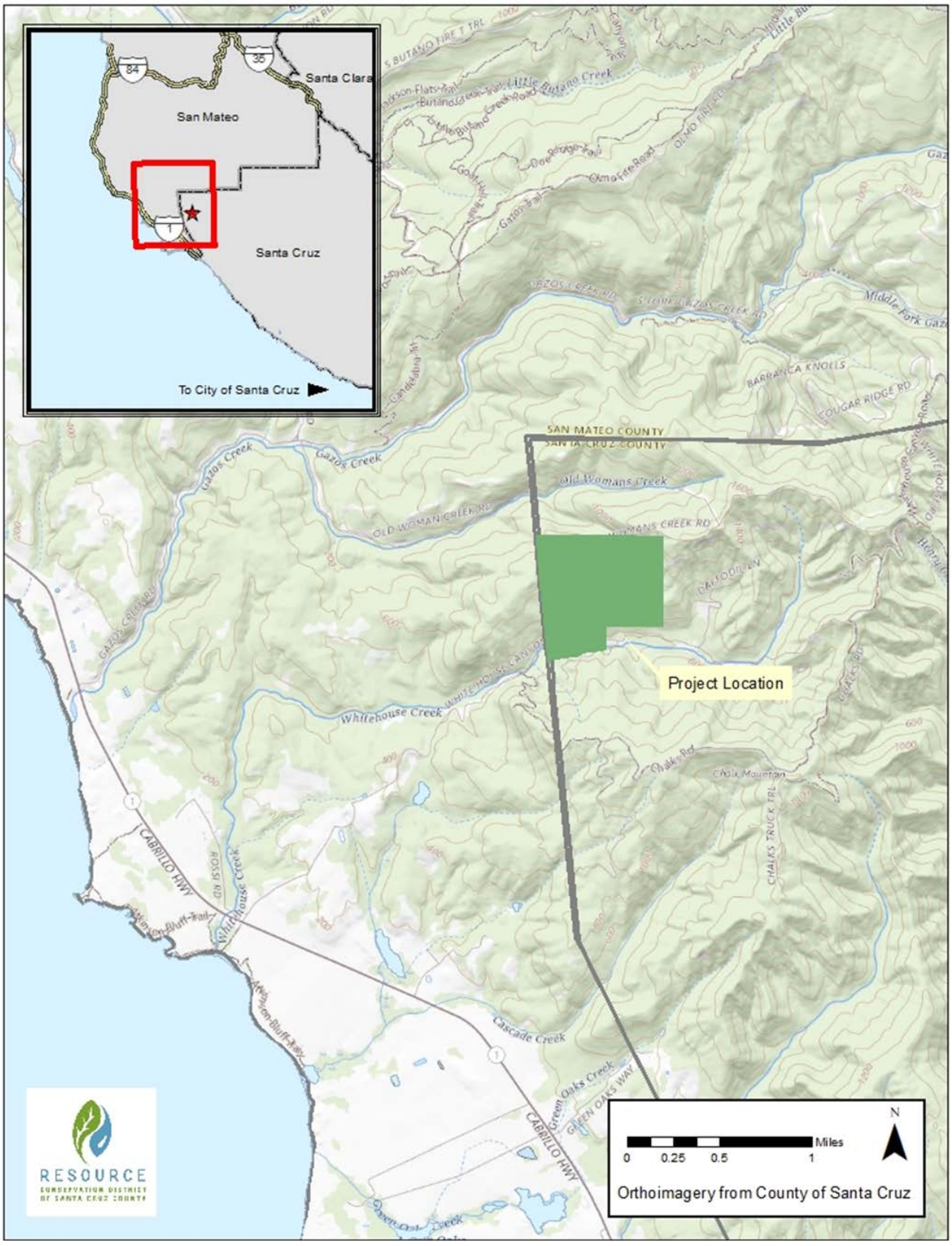


Source: Provided by Santa Cruz RCD in 2021

Figure 1-1 Project location

1.1 CalVTP TREATMENT TYPES

1.1.1 Ecological Restoration

The vegetation treatment areas have experienced a range of burn severities, from low to high severity burns, during the 2020 CZU Lightning Complex. Following the fires, much of the understory vegetation was not fully consumed and has added to the dry vegetative fuel load. The proposed project would implement ecological restoration treatments for the dual benefit of wildfire risk reduction and enhancement of natural habitats, particularly given the burned condition of much of the landscape. Consistent with the CalVTP ecological restoration treatment type, the RCD's proposed ecological restoration treatments would seek to return the landscape closer to natural conditions where natural fire processes can be reestablished and habitat quality can be improved, including controlling, and eliminating nonnative, invasive plants and excess buildup of fire fuel. Specific restoration objectives include restoring the natural ecosystem processes, conditions, and resiliency through the removal of dense understory fuels and invasive species, and reintroduction of native species through tree planting in areas generally outside the Wildland Urban Interface (WUI), as defined in the CalVTP PEIR (CalVTP Final PEIR Volume II pages 2-7, 2-15, and 2-16).

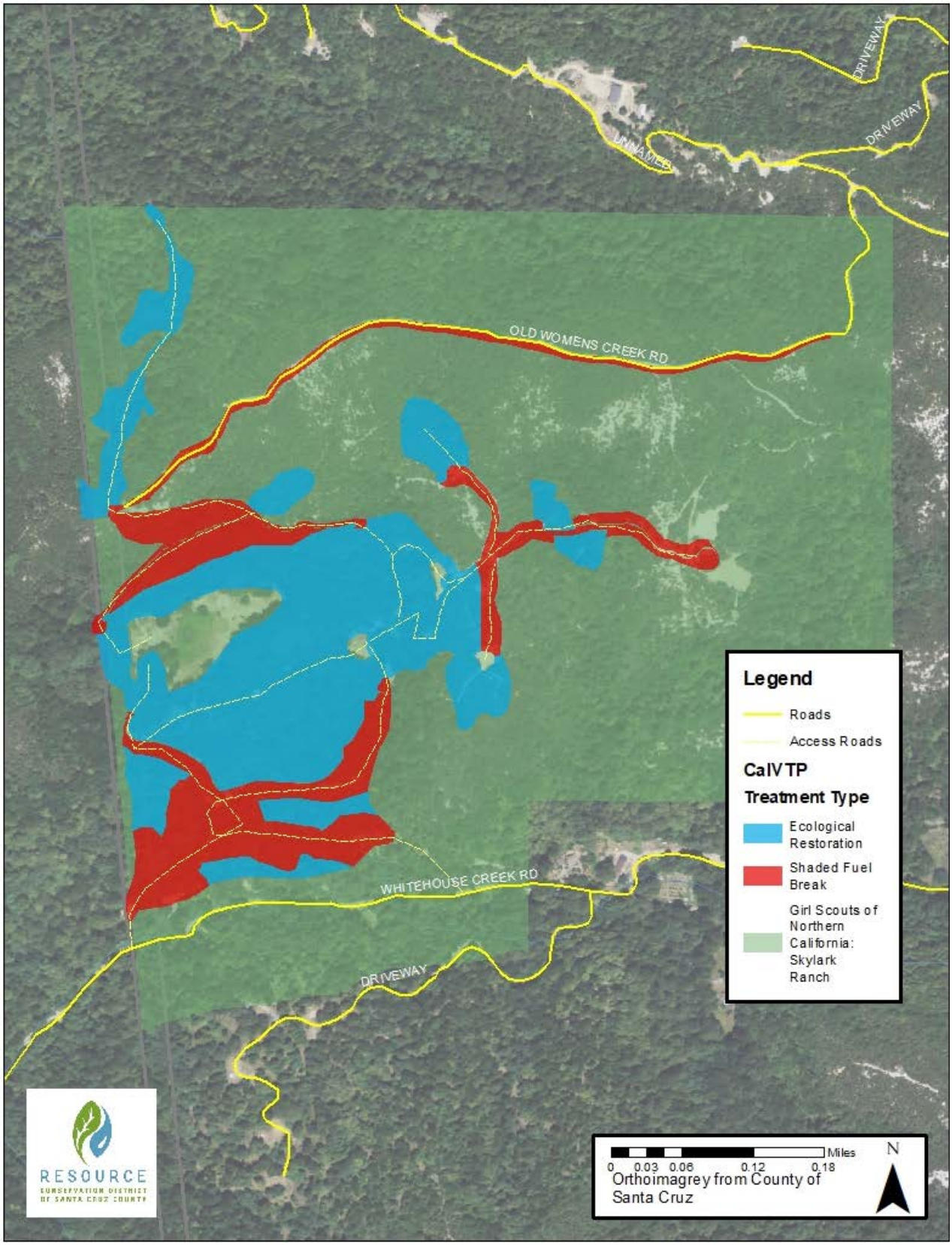
Ecological restoration treatments would occur over 40 acres of the treatment area and would be implemented using manual and mechanical treatment methods, including chainsaws and/or other mechanized hand tools, as well as masticators, skid steers, feller bunchers and chippers. Herbicides may also be used to prevent the growth of invasive vegetation. Implementing ecological restoration treatments would result in a modification of existing fuels that would provide excellent conditions for planting redwood seedlings and ultimately support native vegetative species regeneration to restore habitat conditions including, but not limited to habitat quality and natural fire processes. Ecological restoration treatments would focus on removing dead and dying vegetation, thinning small diameter live trees (i.e., less than 12 inches dbh), and understory vegetation to increase the site's carrying capacity for stand volume, which in turn would increase the growth and vigor or the remaining trees).

The excessive buildup of vegetation and dead and dying material following the 2020 CZU Lightning Complex has degraded conditions. Removing dead, dying, and diseased trees is expected to increase the growth and carbon storage capacity in the residual stand.

1.1.2 Shaded Fuel Break

In the past, areas along Old Woman's Creek Road functioned as a fuel break, but this fuel break was not actively maintained. This project proposes to reinstall and maintain a 10-acre shaded fuel break along Old Woman's Creek Road, as well as create another approximately 10 acres of shaded fuel breaks along roads and trails within the treatment area, including the Girls Scouts of Northern California's driveway, access roads, and walking trails, including the access road to the horse paddock and access to water systems (see Figure 1-2). As defined in the CalVTP PEIR, fuel breaks remove zones of vegetation to support fire suppression efforts and passively interrupt the path of a fire (CalVTP Final PEIR Volume II page 2-7 and 2-11 through 2-13).

Old Woman's Creek Road connects White House Creek Canyon to Old Woman's Creek Canyon and Gazos Creek Canyon. Implementing a shaded fuel break along the ridgetop to the north of the Skylark Ranch property would reduce the threat of catastrophic wildfire to the camp and would protect the surrounding community members that live in these three rural canyons. The shaded fuel breaks would provide emergency responders the opportunity to control or contain wildfires through the modification of flammable vegetation while supporting a healthy and fire resilient residual forest stand through retaining the majority of the overstory canopy to maintain the shade that will reduce the potential for rapid re-growth of understory vegetation. The shaded fuel breaks would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, skid steers, and feller bunchers. Herbicides may also be used to prevent the growth of invasive vegetation.



Source: Provided by Santa Cruz RCD in 2021

Figure 1-2 Proposed CalVTP Treatments

1.2 CalVTP TREATMENT ACTIVITIES

The proposed project would implement ecological restoration and fuel break treatments for the purposes of wildfire risk reduction and the enhancement of natural habitats and forest functions. The vegetation treatment activities that would be used are manual and mechanical treatments, and herbicide application. Each of these activities are described in more detail below.

1.2.1 Mechanical Vegetation Treatment

Mechanical treatments would occur on up to 60 acres and would primarily include skidding, masticating, and chipping target vegetation. Mechanical treatment activities would occur predominately on slopes below 40 percent, along ridges, and may occur on slopes greater than 40 percent by using equipment that can reach target vegetation from existing road infrastructure. Masticators would be used to remove dense stands of understory vegetation and ladder fuels and maintain a healthy overstory. As stated in the CalVTP PEIR Section 2.5.2, mechanical treatments may cut, uproot, crush/compact, or chop existing vegetation through the use of masticators and other methods of application. Understory vegetation, brush, and shrubs under the drip lines of trees shall be cut and masticated leaving root systems intact for resprouting. Understory debris would be chipped and scattered onsite within the treated areas, following best management practices for reducing the spread of pests, disease, and invasive species (see Section 1.5, "Pests, Disease, and Invasive Species" below).

Generally, mechanical treatments would:

- remove dead and dying vegetation;
- remove invasive trees, all sizes (e.g., Eucalyptus); and
- remove or masticate target vegetation 12 inches dbh or less.

1.2.2 Manual Vegetation Treatment

Manual treatments would be implemented exclusively on approximately 10 acres and could be used on up to 60 acres (i.e., where manual and mechanical treatments would be used in combination). To implement manual treatments, hand tools and hand-operated power tools, including chainsaws, would be used to cut, clear, or prune herbaceous or woody species and ladder fuels. Manual treatments would occur predominately on slopes less than 40 percent; however, some manual treatments would occur on steep sleeps between approximately 40-50 percent. The same general guidelines for tree and vegetation removal and retention would be followed as described above for mechanical treatments.

1.2.3 Herbicide Application

Herbicides would be used to prevent the spread and the re-sprouting of invasive species in the treatment areas, predominately along roads. During the initial treatments, herbicide use would be used to control invasive vegetation and prevent regrowth of invasive tree species, such as Tasmanian blue gum (*Eucalyptus globulus*), after their removal. Other target vegetation includes French broom and pampas grasses. Herbicide application would also occur over the treatment areas during maintenance treatments to control understory vegetation and ladder fuels and reduce the reestablishment of invasive species if it is determined to be the least environmentally disturbing activity to aid in reaching future desired conditions. A certified pesticide applicator was consulted to determine the list of potential herbicides and application methods that would be used for the project.

Consistent with the CalVTP (CalVTP Final PEIR Volume II pages 2-27 and 2-28), the herbicides proposed for use are glyphosate, triclopyr, and hexazinone. Herbicides would only be applied directly by hand via cut stump, spot, or foliar spray. Herbicide application would 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. Use of herbicides would be excluded from areas with open water bodies. In addition, both glyphosate and triclopyr are subject to the California Red-Legged Frog Injunction (Center for Biological Diversity v. U.S. EPA [2006] Case No. 02-1580-JSW), and therefore, specific application requirements apply. For localized spot treatments using handheld devices on roadsides and in forests, the application of glyphosate and triclopyr are prohibited within 60 feet of California red-legged frog aquatic breeding critical habitat or non-breeding aquatic critical habitat within critical habitat areas or within 60 feet of aquatic features within the non-critical habitat sections subject to the injunction. The RCD would comply with all laws and regulations governing the use of herbicides.

1.3 BIOMASS DISPOSAL

The proposed mechanical vegetation treatments described above will mulch much of the vegetative debris using a masticator and place it on the ground concurrently with vegetation removal. Additional biomass generated from the CalVTP treatments would primarily be disposed of by chipping. Chipped biomass would be spread over treatment areas and would not exceed 6 inches in thickness/depth. The remaining biomass (approximately 5 percent) would be lopped and scattered within the treatment areas.

1.4 TREATMENT MAINTENANCE

Maintenance treatments are expected to occur on an annual basis by the landowners. Periodic maintenance will occur as needed, determined by qualified staff who will monitor the project. Following initial treatment, site conditions are expected to have a clear, open understory that would promote a healthier, more vigorous forest. An open understory would create a mosaic of vegetation that would support wildlife habitats and the regeneration of native species. Maintenance intervals would be dependent on the reestablishment rate of the understory species and would be triggered by the occurrence of dense, continuous understory and ladder fuels. Maintenance treatments would be conducted through the implementation of mechanical and manual treatments to treat hazard trees, understory vegetation and ladder fuels, and reduce the reestablishment of invasive species. Herbicides would also be used to treat invasive species as needed, as described under Section 1.2.3, "Herbicide Application" above. All maintenance treatments would occur during daytime hours.

1.5 PESTS, DISEASE, AND INVASIVE SPECIES

The pathogen, *Phytophthora ramorum*, commonly referred to as Sudden Oak Death (SOD), infects coastal forests throughout California and Oregon and kills susceptible species including tanoak, coast live oak, California black oak, Shreve's oak, canyon live oak, and madrone saplings. Host species that are in the treatment area include, but are not limited to California bay laurel, coast redwood, and Douglas fir. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, all hand equipment and boots worn by treatment crews will be sanitized and heavy equipment hosed off prior to operations in areas where the spread of SOD is possible. The California Oak Mortality Task Force website contains additional information regarding treatment and disposal measures for plants infected with SOD, which would be monitored for changes in SOD treatment recommendations (http://www.suddenoakdeath.org/).

The fungal disease, *Fusarium circunatum*, commonly referred to as Pitch canker, affects many pine species and can infect Douglas-fir. Most pines native to California are susceptible to pitch canker, but Monterey pine, *Pinus radiate*, is the most widely affected host. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, the same measures as described above to prevent the spread of SOD would be implemented. The Pitch Canker Task Force has additional information regarding treatment and guidelines for handling woody material infected by pitch

canker fungus, which would be monitored for changes. in pitch canker treatment recommendations (https://ufei.calpoly.edu/pitch-canker-task-force/).

French broom, *Genista monspessulana*, is a problematic invasive species due to its ignitability, ability to carry fire into tree canopies, shading out seedlings, and replacing the native plants and forage species. This species has a large seed bank and re-sprouts readily from the root after cutting, freezing, and fire. The California Invasive Plant Council (Cal IPC) recommends pulling French broom to remove the entire plant including its roots to eliminate re-sprouting. The removal of this species is a priority due to its increased fire hazard and adverse impacts to habitat and aesthetics. Additional information about French broom control and treatments is located on the Cal IPC website, which would be monitored for changes in French broom treatment recommendations (https://www.calipc.org/plants/profile/genista-monspessulana-profile/ and https://wric.ucdavis.edu/information/natural%20areas/wr_G/Genista.pdf).

Appendix D

U.S. Fish and Wildlife Service
Consultation Memo

Memo

455 Capitol Mall, Suite 300
Sacramento, CA 95814
916.444.7301

Date: December 22, 2021

To: Leilani Takano and Chad Mitcham; U. S. Fish and Wildlife Service

From: Matt Abernathy, Resource Conservation District of Santa Cruz County
Ted Thayer (Qualified Biologist), Lara Rachowicz (Qualified Biologist), and Lily Bostrom; Ascent Environmental

Subject: Consultation regarding Mitigation Measure BIO-2a of the CalVTP Program EIR for the Camp Skylark and Last Chance Road Forest Health Projects, Approach to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for California Red-legged Frog

Background and Context

The California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (EIR), certified by the Board of Forestry and Fire Protection in December 2019, evaluates the potential environmental effects of implementing qualifying vegetation treatments to reduce the risk of wildfire. The California Department of Forestry and Fire Protection (CAL FIRE) awarded the Resource Conservation District (RCD) of Santa Cruz County a Forest Health Grant for the Skylark Ranch and Last Chance Road Forest Health projects, which include conducting forest management actions in northern Santa Cruz County to enhance forest functions with the added benefit of reducing wildfire. The Skylark Ranch Forest Health Project would occur at Skylark Ranch Girl Scout Camp in western Santa Cruz County and would encompass several individual treatment areas totaling approximately 60 acres. The Last Chance Road Forest Health Project would occur within an approximately 60-acre area along Last Chance Road.

The Last Chance Road Forest Health Project hosts one of three endemic stands of Monterey pine within California. Before the 2020 CZU Lightning Complex, encroaching Douglas fir was inhibiting seedling growth and regeneration of the native stand of Monterey pine. Following the 2020 CZU Lightning Complex, the existing Monterey pine seedbank was given an opportunity to reoccupy this hillside. California red-legged frog dispersal habitat within the Last Chance Road treatment area was substantially altered by the 2020 CZU Lightning Complex. The fire resulted in between 60 and 100 percent tree mortality and killed and removed much of the understory vegetation.

The Skylark Ranch Girl Scout Camp occupies on a parcel that stretches from White House Creek to the ridge top delineating White House Creek Canyon. Preceding the 2020 CZU Lightning Complex, the property had overly dense stands of trees, creating crowded forest conditions. Skylark Ranch's forest consisted of tanoak, Douglas fir, coast redwood, with a stand of old growth coast redwood, and chaparral. Following the 2020 CZU Lightning Complex, the low- to high-severity burns caused a significant amount of mortality; however, it was not severe enough to eliminate the excess fuel or reduce the density of the remaining live vegetation. The upland habitat for California red-legged frog within the Skylark Ranch treatment area was substantially altered by the 2020 CZU Lightning Complex. Fire effects were variable, ranging from understory burning, which left coast redwood canopies intact, to areas of total

tree mortality, and 100 percent reduction in cover within knobcone pine and coastal scrub habitats. Both projects require specific treatments to encourage beneficial forest ecosystem function.

Manual treatments, mechanical treatments (i.e., cutting or limbing vegetation with a masticator, feller-buncher, skid steer, or chipper), and targeted application of herbicides using hand-held devices (i.e., cut stump or foliar spray application of herbicides) would be used for both the Skylark Ranch and Last Chance Road projects. The Skylark Ranch project would conduct initial treatments consisting of ecological restoration and the creation of shaded fuel breaks followed by ongoing maintenance treatments. Both the initial treatments and ongoing maintenance would include manual and mechanical treatments, and targeted herbicide application.

The Last Chance Road Project would be implemented in three phases, including Phase I treatments, Phase II treatments, and ongoing maintenance treatments. Phase I would involve ecological restoration treatments using mechanical equipment only to remove dead, dying, and diseased trees, hazard trees, and downed material. Phase II would involve ecological restoration and the creation of a shaded fuel break using manual and mechanical treatment activities, and targeted herbicide use. Ongoing treatment maintenance would occur as needed using manual and mechanical treatments activities, and targeted herbicide application.

In compliance with the California Environmental Quality Act (CEQA), the RCD is currently preparing a separate Project-Specific Analysis (PSA) for each of these projects. During preparation of the PSAs, California red-legged frog (*Rana draytonii)* was identified as a species with potential to occur in both treatment areas. Adverse effects on special-status wildlife species, including on California red-legged frog, were considered at a program level in the CalVTP Program EIR. The PSAs for the proposed vegetation treatments document the site- and treatment-specific impacts on each special-status species with potential to occur in the treatment areas and includes project-level implementation guidance for applicable standard project requirements (SPRs) and mitigation measures from the CalVTP Program EIR.

Purpose of this Memo

This memo has been prepared to document compliance with Mitigation Measure BIO-2a of the CalVTP Program EIR for California red-legged frog and to facilitate consultation with the U.S. Fish and Wildlife Service (USFWS). Implementation of Mitigation Measure BIO-2a is required for these projects because treatment would occur in areas assumed to be occupied by a species listed under the Endangered Species Act. Mitigation Measure BIO-2a requires the RCD to consult with the USFWS regarding avoidance of California red-legged frog mortality, injury, and disturbance during treatment and the RCD's determination that habitat function for the species would be maintained after treatment implementation. A description of the proposed projects is attached (Attachment 1) and measures to avoid disturbance, injury, and mortality and an analysis of habitat function are provided below pursuant to Mitigation Measure BIO-2a. The RCD is seeking concurrence that disturbance, injury, or mortality would likely be avoided by use of these measures and that habitat function would be maintained. The outcome of this consultation will be summarized in the PSAs.

Relevant Species Information

Studies have demonstrated that California red-legged frogs remain very close to breeding habitat during the breeding/wet season and typically do not move more than approximately 300 feet into upland habitats, although this distance is likely site specific and based on the proximity to the nearest suitable nonbreeding habitat (Bulger et al. 2003; Fellers and Kleeman 2007). In the dry months, California red-legged frogs typically remain near aquatic habitat and will use a variety of microsites that remain moist and cool through the summer including leaf litter and dense understory for refuge and foraging.

Longer movement distances typically occur during the wet season and are associated with frogs traveling between breeding and nonbreeding aquatic habitat and with dispersing juveniles (Fellers and Kleeman 2007, Bulger et al. 2003, USFWS 2002). Adult and juvenile California red-legged frog are known to travel through upland habitat (e.g., riparian, woodland, grassland) to move between breeding and nonbreeding sites (e.g., other ponds, deep pools in streams, moist and cool riparian understory, burrows) for access to refugia and foraging habitat, or to disperse to new breeding locations. During migration, California red-legged frogs may travel long distances from aquatic habitat and may travel in straight lines irrespective of vegetation types and, although rare, have been documented to move long distances (e.g., 1.7 miles between aquatic habitat sites) (Bulger et al. 2003). Most movements of California red-legged frogs greater than 100 feet generally coincide with winter rains (Fellers and Kleeman 2007), and most overland movements of adults occur at night, although juvenile frogs tend to be active both day and night (USFWS 2002).

Last Chance Forest Health Project. California red-legged frog has been documented to occur within Waddell Creek, Scott Creek, and Laguna de las Trancas (CNDDB 2021). These waters are all located between 0.30 mile and 0.75 mile from the treatment area. Therefore, while there is no potential breeding habitat within 300 feet of the Last Chance Forest Health Project treatment area, the project is within migration distance from breeding habitat, and it is assumed that California red-legged frogs use the treatment area during migration.

Skylark Ranch Forest Health Project. California red-legged frog has been documented to occur within Whitehouse Creek approximately 0.85 mile downstream from the treatment area (CNDDB 2021). Whitehouse Creek, which is located approximately 200 feet from the treatment area at its nearest point, is a perennial stream in a steep canyon and assumed to be breeding habitat for California red-legged frog. The remainder of the treatment area is located within the dispersal distance of California red-legged frog and is assumed to be migratory habitat.

CalVTP Standard Project Requirements and Mitigation Measures with Project-Specific Implementation Guidance

Numerous SPRs and mitigation measures from the CalVTP Program EIR will be implemented to protect biological resources, such as measures to protect special-status plants, sensitive natural communities, and nesting birds; to avoid erosion and adverse effects from herbicides; and to train workers to avoid sensitive biological resources. The full text of the measures will be provided in the PSAs. Relevant excerpts of SPRs related to the seasonality of work and use of herbicides during the implementation of the Skylark Ranch and Last Chance Road Forest Health projects are included below to provide additional relevant information. In addition, relevant excerpts of Mitigation Measure BIO-2a from the CalVTP Program EIR are presented below. Following the excerpt of each measure, measures are refined to apply specifically to the Skylark Ranch and Last Chance Road Forest Health projects. These project-specific measures are consistent with the CalVTP measures and identify tailored actions relevant to the site-specific conditions of the projects.

CalVTP Standard Project Requirement Refinements Relevant to Seasonality of Work and Precipitation Events

CalVTP SPR GEO-1: Suspend Disturbance during Heavy Precipitation

The project proponent will limit work to outside of the wet season. The wet season starts with the first frontal rain system depositing a minimum of 0.25 inch of rain after October 15 and ends on April 15. Additionally, mechanized and herbicide treatments will be avoided 24 hours after a rain event defined as any precipitation resulting in 0.2 inch or greater throughout the year. Mechanical and herbicide treatments will not occur when soil is saturated or wet.

CalVTP Standard Project Requirements Relevant to Herbicide Use in California Red-Legged Frog Habitat

CalVTP SPR HAZ-5: Spill Prevention and Response Plan (excerpt provided for context)

The project proponent or licensed Pest Control Advisor (PCA) will prepare a Spill Prevention and Response Plan (SPRP) prior to beginning any herbicide treatment activities to provide protection to onsite workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants. The SPRP will include (but not be limited to):

- a map that delineates staging areas, and storage, loading, and mixing areas for herbicides;
- a list of items required in an onsite spill kit that will be maintained throughout the life of the activity;
- procedures for the proper storage, use, and disposal of any herbicides, adjuvants, or other chemicals used in vegetation treatment.

CalVTP SPR HAZ-6: Comply with Herbicide Application Regulations (excerpt provided for context)

The project proponent will coordinate pesticide use with the applicable County Agricultural Commissioner(s), and all required licenses and permits will be obtained prior to herbicide application. The project proponent will prepare all herbicide applications to do the following:

- Be implemented consistent with recommendations prepared annually by a licensed PCA.
- Comply with all appropriate laws and regulations pertaining to the use of pesticides and safety standards for employees and the public, as governed by the EPA, DPR, and applicable local jurisdictions.
- Adhere to label directions for application rates and methods, storage, transportation, mixing, container disposal, and weather limitations to application such as wind speed, humidity, temperature, and precipitation.
- Be applied by an applicator appropriately licensed by the State.

CalVTP SPR HYD-5: Protect Non-Target Vegetation and Special-status Species from Herbicides (excerpt provided for context)

The project proponent will implement the following measures when applying herbicides:

- Locate herbicide mixing sites in areas devoid of vegetation and where there is no potential of a spill reaching non-target vegetation or a waterway.
- Use only herbicides labeled for use in aquatic environments when working in riparian habitats or other areas where there is a possibility the herbicide could come into direct contact with water. Only hand application of herbicides will be allowed in riparian habitats and only during low-flow periods or when seasonal streams are dry.
- No terrestrial or aquatic herbicides will be applied within WLPZs of Class I and II watercourses, if feasible. If this is not feasible, hand application of herbicides labeled for use in aquatic environments may be used within the WLPZ provided that the project proponent notifies the applicable regional water quality control board at least 15 days prior to herbicide application. The feasibility of avoiding herbicide application within WLPZ of Class I and II watercourses will be determined by the project proponent and may be based on whether doing so will preclude achieving CalVTP program objectives, including, but not limited to, protection of vulnerable communities. The reasons for infeasibility will be documented in the PSA.
- For spray applications in and adjacent to habitats suitable for special-status species, use herbicides containing dye (registered for aquatic use by DPR, if warranted) to prevent overspray.

- Application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative).
- No herbicides will be applied during precipitation events or if precipitation is forecast 24 hours before or after project activities.

CalVTP MITIGATION MEASURE BIO-2A: AVOID MORTALITY, INJURY, OR DISTURBANCE AND MAINTAIN HABITAT FUNCTION FOR LISTED WILDLIFE SPECIES AND CALIFORNIA FULLY PROTECTED SPECIES

Excerpt Regarding Impact Avoidance

Following is the excerpt from Mitigation Measure BIO-2a regarding impact avoidance, which is provided for context.

Avoid Mortality, Injury, or Disturbance of Individuals

- The project proponent will implement one of the following two measures to avoid mortality, injury, or disturbance of individuals:

    1. Treatment will not be implemented within the occupied habitat. Any treatment activities outside occupied habitat will be a sufficient distance from the occupied habitat such that mortality, injury, or disturbance of the species will not occur, as determined by a qualified RPF or biologist using the most current and commonly-accepted science and considering published agency guidance; OR
    2. Treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, CDFW and/or USFWS/NOAA Fisheries will be consulted to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species.

Project-Specific Mitigation Measure Refinements for California Red-legged Frog:

- **Pre-treatment surveys and biological monitoring.** Pre-treatment visual surveys will be performed daily by a qualified RPF, biologist, or biological monitor, prior to implementation of any treatment activities (i.e., mechanical, manual, and herbicide) within 300 feet of Whitehouse Creek and within or adjacent to other sensitive habitat areas (e.g., wet intermittent streams, wet seeps). If a California red-legged frog is found during pre-treatment surveys or enters the project site during treatment activities, all work will stop until the animal leaves on its own.
- **Manual treatments only within 30 feet of Class III streams.** In addition to the implementation of SPR HYD-4, which sets specific buffers for Class I and Class II streams, the RCD will restrict mechanical activities to outside of a 30-foot buffer on Class III streams.
- **Limited herbicide use.** Herbicide use within 300 feet of Whitehouse Creek (operations would occur no closer than 200 feet of Whitehouse Creek) will be limited to direct application to stumps and stems. All herbicide use during project implementation will comply with the herbicide use restrictions in the stipulated injunction issued by the Federal District Court for the Northern District of California to resolve the 2006 case brought against the Environmental Protection Agency by the Center for Biological Diversity. For example, to comply with the injunction, only cut stump and basal bark applications and targeted spot treatments of invasive weeds will be allowed in California red-legged frog habitat under the following conditions.
    - Cut stump and basal bark applications may be used but will not be applied within 60 feet of breeding or non-breeding aquatic habitat; and

- Localized spot treatments using hand-held devices may be used; no aerial spray will be used. Treatments will not occur within 60 feet of aquatic features or aquatic critical habitat.

Excerpt Regarding Habitat Function

Following is the excerpt from Mitigation Measure BIO-2a regarding habitat function, which is provided for context.

Maintain Habitat Function

- The project proponent will design treatment activities to maintain the habitat function, by implementing the following:
  - While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; dens; tree snags; large raptor nests [including inactive nests]; downed woody debris; food sources). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science.
  - If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that listed or fully protected wildlife with specific requirements for high canopy cover (e.g., Humboldt marten, fisher, spotted owl, coastal California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained.
- A qualified RPF or biologist of the lead agency will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. **Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained.** If the lead agency determines after consultation that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.

RCD DETERMINATION REGARDING MAINTENANCE OF HABITAT FUNCTION

The RCD has determined that habitat function for California red-legged frog will be maintained after implementation of the Skylark Ranch and Last Chance Road Forest Health Projects.

Last Chance Road Forest Health Project

Project implementation within the Last Chance Road treatment area would include the following vegetation removal standards that would protect migration habitat for California red-legged frog:

- Retention of native live vegetation greater or equal to 8 inches diameter at breast height (dbh);
- Retention of logs greater than 12 inches with preference for retaining the largest logs and those with cavities, for a total of an average of approximately 10 tons per acre;
- Native shrub retention
  - No removal of riparian species (e.g., elderberry);

  - In forested habitats, space shrubs between 25-50 feet for each species occurrence, where shrub crown is approximately 10-15 feet wide. Spacing may be closer than 25 feet on level ground and greater than 50 feet on steeper ground or near structures; and

- Watercourse and Lake Protection Zones (WLPZs) ranging from 50-150 feet would be implemented adjacent to aquatic features, which would limit treatment activities such as requiring that equipment not be driven in WLPZs, prohibiting service of equipment, and maintaining at least 75 percent surface cover.

The California red-legged frog dispersal habitat within the Last Chance Road treatment area was substantially altered by the 2020 CZU Lightning Complex. The fire resulted in between 60 and 100 percent tree mortality and killed and removed much of the understory vegetation.

Removal of standing dead trees and dead understory vegetation during Phase I treatments at Last Chance would not substantially alter the suitability of post-fire habitat within the treatment area for California red-legged frog. Dispersal habitat for California red-legged frog includes areas that provide shelter, forage, and predator avoidance and does not contain barriers to dispersal between occupied or previously occupied aquatic habitat (USFWS 2010). The retention of existing shrub cover as well as retention of logs would provide cover, forage opportunities, and predator avoidance for migrating California red-legged frogs, and the project does not propose the building of new roads or other barriers to dispersal. Phase II and maintenance treatments would result in reduced understory shrub cover when compared to pre-fire conditions but would maintain sufficient shrub cover and down wood to provide cover for migrating California red-legged frogs. Overall, habitat for California red-legged frog movement, cover, foraging, and predator avoidance within treatment areas would not be significantly reduced. The treatment area is located along an existing road and is adjacent to large areas of natural vegetation; treatments are not expected to hinder movement of California red-legged frog or result in landscape-scale modifications. For these reasons, the RCD has determined that habitat function for California red-legged frog would be maintained after implementation of the Last Chance Forest Health Project.

Skylark Ranch Forest Health Project

Project implementation within the Skylark Ranch treatment area would include the following vegetation removal standards that would result in protection of migration habitat for California red-legged frog:

- Retention of native live vegetation greater than 12 inches dbh;
- Retention of logs greater than 12 inches with preference for retaining the largest logs and those with cavities, for a total of an average approximately 10 tons per acre;
- Native shrub retention
  - No removal of riparian species (e.g., elderberry);
  - In forested habitats, space shrubs between 25-50 feet for each species occurrence, where shrub crown is approximately 10-15 feet wide. Spacing may be closer than 25 feet on level ground and greater than 50 feet on steeper ground or near structures; and
  - Retain a minimum of 35% relative cover of existing shrubs within coastal scrub and chaparral habitat, maintaining a diversity of understory species.
- Watercourse and Lake Protection Zones (WLPZs) ranging from 50-150 feet would be implemented adjacent to aquatic habitat, which would limit treatment activities such as requiring that equipment not be driven in WLPZs, prohibiting service of equipment, and maintaining at least 75 percent surface cover.

The upland habitat for California red-legged frog within the Skylark Ranch treatment area was substantially altered by the 2020 CZU Lightning Complex. Fire effects were variable, ranging from understory burning, which left coast redwood canopies intact, to areas of total tree mortality, and 100 percent reduction in cover within knobcone pine and coastal scrub habitats.

Initial treatment within knob-cone pine/chaparral habitat would not substantially change the existing post-fire condition of California red-legged frog habitat, as little existing tree or shrub cover remains to be removed. Future maintenance treatments within knob-cone pine/chaparral habitats would retain a minimum of 35 percent of shrub cover. This shrub retention combined with the limited treatment area of this habitat type, especially when compared to the total area of this habitat within the Skylark Ranch property, would result in preservation of cover that may be used by California red-legged frog.

Across all other habitat types the retention of existing shrub cover during initial treatment and maintenance treatments would provide for adequate cover within dispersal habitat for California red-legged frog. Maintenance treatments would result in reduced understory vegetation when compared to pre-fire conditions, but would maintain sufficient shrub cover and down wood for California red-legged frog dispersal habitat. No work would occur within 200 feet of Whitehouse Creek.

As discussed for the Last Chance Road project above, dispersal habitat for California red-legged frog requires shelter, forage, and predator avoidance and does not contain barriers to dispersal (USFWS 2010). The project would retain down logs and shrubs to provide cover, foraging opportunities, and predator avoidance. The treatment area is adjacent to large areas of natural vegetation; treatments are not expected to hinder movement of California red-legged frog or result in landscape-scale modifications. Therefore, the RCD has determined that habitat function for California red-legged frog would be maintained after implementation of the Skylark Ranch Forest Health Project.

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USFWS. *See* U.S. Fish and Wildlife Service.

Attachment 1

Project Descriptions for the Last Chance Road and Skylark Ranch Forest Health Projects

PROJECT DESCRIPTION FOR LAST CHANCE ROAD FOREST HEALTH PROJECT

The Last Chance Road Forest Health Project (project or proposed project) consists of vegetation treatments in the vicinity of Last Chance Road, immediately east of State Route (SR) 1 and approximately 22 miles southeast of the community of Pescadero and 21 miles northwest of the City of Santa Cruz (refer to Figure 1-1). The CalVTP treatments would occur within a 60-acre treatment area in Santa Cruz County. The vegetation treatments are intended to reduce potential vegetative ignition sources, improve the forest's health and vigor, and improve the capacity for emergency response and wildfire suppression during a wildfire.

The CalVTP treatment types that would be implemented are ecological restoration and a shaded fuel break, and the proposed treatment activities to implement the project are manual and mechanical treatments and herbicide application.

The proposed project is within the 2020 CZU Lightning Complex burn area and tree mortality in the treatment area varies between 60 and 100 percent depending on the species. Thus, the project has two distinct phases, the first phase would focus on the removal of trees that are a public safety hazard, dead or dying, irreversibly diseased, severely damaged, or and invasive species. Phase II would treat successional vegetation (i.e., naturally regenerating Monterey pine, future understory fuels, and invasive species) to restore ecosystem processes, conditions, and resiliency, as well as implement a 20-acre shaded fuel break treatment along Last Chance Road. Each phase of the proposed project is described in more detail below.

1.1 PHASE I CalVTP TREATMENT TYPES

The proposed Phase I CalVTP treatments would occur throughout the entire 60-acre treatment area. The Phase I treatment area is shown in Figure 1-2 and the CalVTP treatment type and activities that would be used to implement Phase I are summarized in Table 1-1.

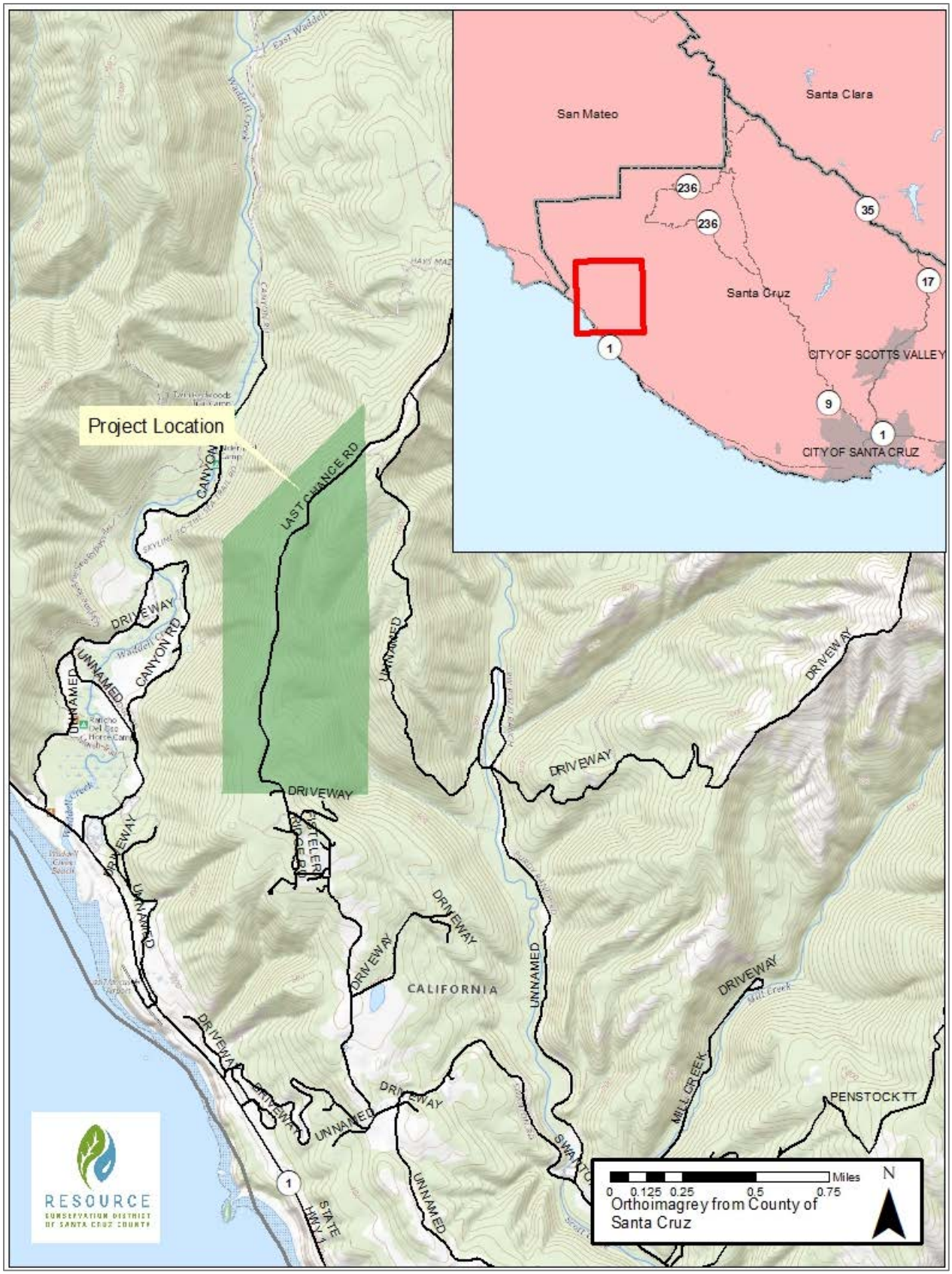
Table 1-1 Proposed Phase I CalVTP Treatments

CalVTP Treatment Type	Treatment Description	CalVTP Treatment Activity	Treatment Size (acres)	Equipment Used for Treatments	Timing of CalVTP Treatments
Ecological Restoration	Habitat improvement/fire resiliency treatments	Mechanical (cutting, limbing)	60	Feller buncher, skid steer, chipper (for chipping biomass)	May 2022 – August 2022
Total Acres			60		

Source: Provided by Santa Cruz RCD in 2021

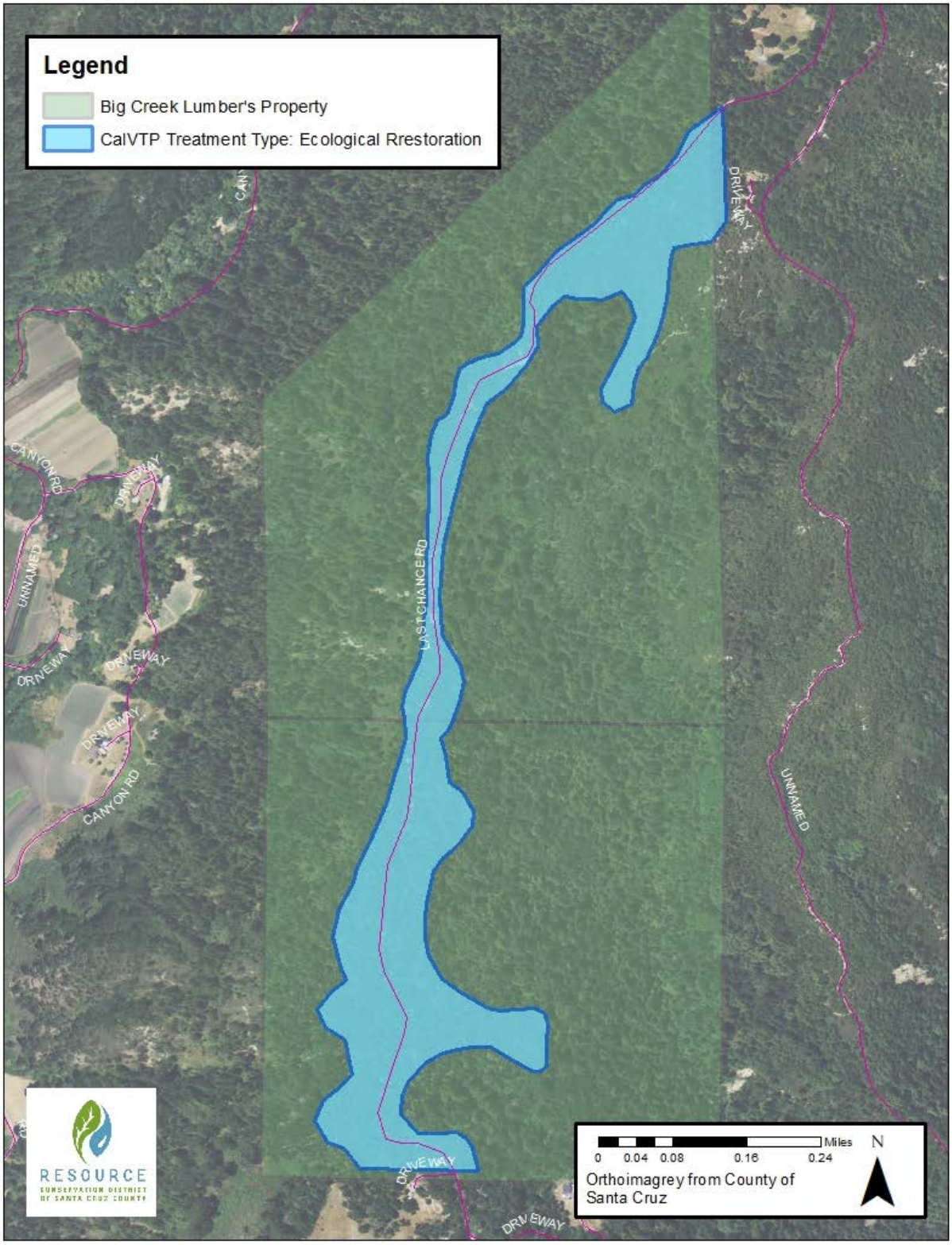
A feller buncher and skid steer would be used to remove dead or downed material; hazard trees; dead, dying, or diseased trees; and understory vegetation if appropriate. Trees removed would be limbed and topped, and boles (i.e., tree trunks) would be decked in the treatment area in strategic locations away from the road to reduce visibility from the road and fire fuel hazards along roadways. The CalVTP treatment activities that would be used to implement these treatment types are described in more detail below in Section 1.3, "CalVTP Treatment Activities."

Initial treatments are estimated to occur over approximately 40 days, beginning in May 2022. However, the timeframe may change in the event of delays, such as weather. Treatment crews would consist of up to 10 people working at any one time. Treatment vehicle and equipment staging would occur within the designated treatment area and within pullouts along Last Chance Road. All work would occur during daytime hours.



Source: Provided by Santa Cruz RCD in 2021

Figure 1-1 Project Location



Source: Provided by Santa Cruz RCD in 2021

Figure 1-2 Phase I CalVTP Treatments

1.1.1 Phase I Ecological Restoration

The vegetation treatment area has experienced a range of burn severities, from low to high, during the 2020 CZU Lightning Complex. The proposed project would implement ecological restoration treatments for the dual purpose of wildfire risk reduction and enhancement of natural habitats, particularly given the burned condition of much of the landscape. Consistent with the CalVTP ecological restoration treatment type, the RCD's proposed ecological restoration treatments would seek to return the landscape closer to natural conditions where natural fire processes can be reestablished and habitat quality can be improved, including controlling and eliminating nonnative, invasive plants and excess buildup of fire fuel. Specific restoration objectives include restoring the natural ecosystem processes, conditions, and resiliency through the removal of the degrading overstory of standing dead, dying, and diseased woody vegetation and any present invasive species.

Ecological restoration treatments would occur over the full 60-acre treatment area and would be implemented using mechanical treatment methods, including equipment such as feller bunchers and skid steers to remove dead, dying, and diseased trees and invasive species. Implementing ecological restoration treatments would result in a modification of existing fuels that would provide ideal conditions for the natural recruitment of Monterey pine, while reducing fuel loads to protect the regeneration of native vegetation and restore habitat conditions including, but not limited to habitat quality and natural fire processes. Ecological restoration treatments would focus on removing dead, dying, and diseased vegetation and some understory vegetation to increase the site's carrying capacity for stand volume, which in turn would increase the growth and vigor of any remaining live trees.

The excessive buildup of vegetation and dead and dying material following the 2020 CZU Lightning Complex has degraded conditions in the treatment area. Removing dead, dying, and diseased trees is expected to increase the growth and carbon storage capacity in the residual stand.

1.2 PHASE II CalVTP TREATMENT TYPES

The proposed Phase II CalVTP treatments would also occur throughout the entire 60-acre treatment area. The Phase II treatment area is shown in Figure 1-3 and the CalVTP treatment types and activities that would be used to implement Phase II are summarized in Table 1-2.

Table 1-2 Proposed Phase II CalVTP Treatments

CalVTP Treatment Type	Treatment Description	CalVTP Treatment Activity	Treatment Size (acres)	Equipment Used for Treatments	Timing of CalVTP Treatments
Ecological Restoration	Habitat improvement/fire resiliency treatments	Manual, mechanical, herbicide use (cutting, masticating, cut stump or foliar spray of herbicides, planting)	33	Chainsaws and/ or other mechanized hand tools, masticator, chipper, herbicide applicator	2-5 years after Phase I
Shaded Fuel Break	Treatment of heavy brush along Last Chance Road	Manual, mechanical, herbicide use (cutting, masticating, cut stump or foliar spray of herbicides, biomass chipping)	27	Masticator, chipper, chainsaws, herbicide applicator	2-5 years after Phase I
Total Acres			60		

Source: Provided by Santa Cruz RCD in 2021

A masticator (mulcher) would be utilized to remove understory vegetation; dead or downed material; hazard trees; dead, dying, and diseased trees; and thin live trees up to 8 inches diameter at breast height (dbh) where tree density is too high. Manual treatment crews would utilize chainsaws and/or other various hand mechanized or hand tools to prune trees and woody vegetation; buck downed debris and materials; and to

remove dead, dying, and diseased trees of any diameter, and live trees up to 8 inches dbh. Herbicide application may be utilized to eliminate the spread and re-sprouting of invasive species in the treatment areas predominately along roads and trails. The CalVTP treatment activities that would be used are described in more detail below in Section 2.3, "CalVTP Treatment Activities."

The timeframe for implementation of Phase II is dependent on securing future funds and the rate of vegetative regeneration, but would likely occur within two to five years after completion of Phase I treatments. The treatment area would be monitored after implementation of Phase I treatments to determine when Phase II treatments would benefit the area, and to confirm that site conditions and the anlaysis is this PSA are still relevant. Treatment crews would consist of up to 10 people working onsite at any one time. Treatment vehicle and equipment staging would occur within the designated treatments areas and within pullouts along Last Chance Road. All work would occur during daytime hours.

1.2.1 Phase II Ecological Restoration

As the second phase of treatment, the project proponent would treat the naturally regenerating Monterey pine, successional understory fuels, and invasive species in areas outside of the WUI to enhance the ecosystem processes, conditions, and resiliency, and to create healthy tree densities and increase survivorship within a 33-acre portion of the treatment area. This is consistent with the description of the CalVTP ecological restoration treatment type, as defined in the PEIR (CalVTP Final PEIR Volume II page 2-7 and pages 2- 15 and 2-16). Implementing the treatment activities would encourage ideal growing conditions for the endemic Monterey pine, and would modify understory vegetation densities to provide adequate habitat and restore natural fire processes.

The treatment area supports one of three endemic stands of Monterey pine within California. Before the CZU Lightning Complex Fire encroaching Douglas fir was inhibiting seedling growth and natural regeneration of the Monterey pine stand. Following the CZU Lightning Complex Fire, the existing Monterey pine seedbank was given an opportunity to reoccupy this hillside. Monterey pine cones are serotinous, requiring heat to release the seeds. Typically, and under natural a fire return regime, Monterey pine regenerates in a manner that results in overstocking. In the absence of fire, or other natural disturbance event, successional saplings require selectively thinning within the stand and treatment of the understory vegetation to mimic natural low-severity, ground fires that would create ideal vegetation density to create favorable conditions for Monterey pine forest conditions.

Future desired conditions are 150 to 300 trees per acre, with few to no crowns interlocking, and a managed understory without presence of ladder fuels. Ecological restoration would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, and chippers. Herbicides may also be used to prevent the growth of or remove invasive vegetation.

1.2.2 Phase II Shaded Fuel Break

This project also proposes to create a 27-acre shaded fuel break treatment along Last Chance Road that would prevent or slow the spread of future wildland fires to structures and surrounding natural resources (see Figure 1-3). As defined in the CalVTP PEIR, fuel breaks remove zones of vegetation to support fire suppression efforts and passively interrupt the path of a fire (CalVTP Final PEIR Volume II Section 2.5.1 page 7 and page 11-14). The shaded fuel break would provide emergency responders an opportunity to control or contain wildfires through the modification of flammable vegetation while supporting a healthy and fire resilient residual forest stand through retaining the majority of the overstory canopy to maintain the shade that would reduce the potential for rapid re-growth of understory vegetation. The area within which the shaded fuel break would be created was burned in the CZU Lightning Complex Fire. Dead, dying, and hazard trees would be removed from this area in Phase I of treatment. In Phase II, successional vegetation along the

road would be managed as it establishes to facilitate the selective growth of certain vegetation that would comprise a shaded fuel break. The creation of this shaded fuel break would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, and chippers. Herbicides may also be used to prevent the growth of invasive vegetation.

1.3 CalVTP TREATMENT ACTIVITIES

Mechanical treatment activities would be implemented in Phase I. Mechanical, manual, and herbicide treatment activities would be implemented for Phase II. Each of these activities are described in more detail below; phases are not distinguished in the descriptions below because the activities would be the same for both phases, as applicable.

1.3.1 Mechanical Vegetation Treatment – Phase I and II

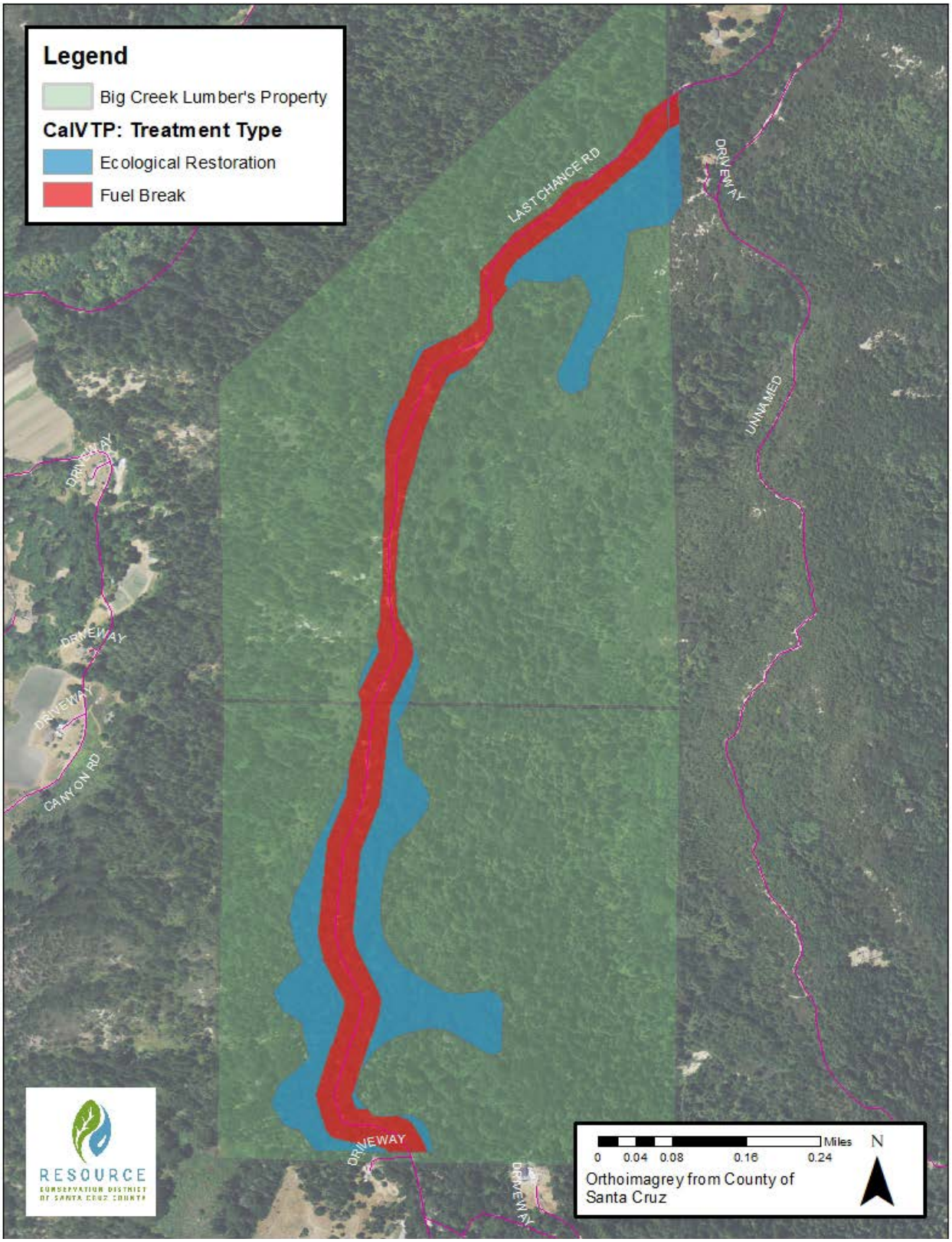
Mechanical treatments would occur on up to the full 60 acres proposed for treatment and would primarily include skidding, masticating, and chipping target vegetation. Mechanical treatment activities would occur predominately on slopes less than 40 percent, along ridges, and potentially also on slopes greater than 40 percent by using equipment that can reach target vegetation from existing road infrastructure. Masticators would be used to remove dense stands of understory vegetation and ladder fuels and maintain a healthy overstory. As stated in the CalVTP PEIR Section 2.5.2, mechanical treatments may cut, uproot, crush/compact, or chop existing vegetation through the use of masticators and other methods of application. Understory vegetation, brush, and shrubs under the drip lines of trees shall be cut and masticated leaving root systems intact for resprouting. Understory debris would be chipped and scattered onsite within the treated areas, following best management practices for reducing the spread of pests, disease, and invasive species (see Section 1.6, "Pests, Disease, and Invasive Species" below).

Generally, mechanical treatments would:

- remove dead and dying vegetation;
- remove invasive trees, all sizes (e.g., Eucalyptus); and
- remove or masticate target vegetation 8 inches dbh or less.

1.3.2 Manual Vegetation Treatment – Phase II

Manual treatments would be implemented on at least 10 acres and could be used on up to the full 60 acres (i.e., where manual and mechanical treatments would be used in combination). To implement manual treatments, hand tools and hand-operated power tools, including chainsaws, would be used to cut, clear, or prune herbaceous or woody species and ladder fuels. Manual treatments would occur predominately on slopes less than 40 percent; however, some manual treatments would occur on steep sleeps between approximately 40-50 percent. The same general guidelines for tree and vegetation removal and retention would be followed as described above for mechanical treatments.



Source: Provided by Santa Cruz RCD in 2021

Figure 1-3 Phase II CalVTP Treatments

1.3.3 Herbicide Application – Phase II

Herbicides would be used as a potential ongoing maintenance tool to control invasive species, and could be used within the entire 60-acre treatment area. Following best management practices for invasive species, specifically French broom (*Genista monsperssulana*), herbicides may be applied when manual removal methods are not a viable or effective option. Consistent with the CalVTP (CalVTP Final PEIR Volume II Section 2.5.2 page 2-27 to 2-28), the herbicides proposed for use are glyphosate and triclopyr and would only be applied directly by hand via cut stump treating or targeted foliar spray on monoculture stands. Herbicide application would 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. In addition, both glyphosate and triclopyr are subject to the California Red-Legged Frog Injunction (Center for Biological Diversity v. U.S. EPA [2006] Case No. 02-1580-JSW), and therefore, specific application requirements apply. For localized spot treatments using handheld devices on roadsides and in forests, the application of glyphosate and triclopyr are prohibited within 60 feet of California red-legged frog aquatic breeding critical habitat or non-breeding aquatic critical habitat within critical habitat areas or within 60 feet of aquatic features within the non-critical habitat sections subject to the injunction. The RCD would comply with all laws and regulations governing the use of herbicides.

1.4 BIOMASS DISPOSAL

After treatment, some biomass would remain onsite as decked logs, other biomass would be disposed of through mastication of material, chipping, and in some locations, and lopping and scattering; all biomass would remain onsite.

1.4.1 Phase I Biomass Disposal

The proposed mechanical vegetation treatments that would occur during Phase I would limb and top large woody vegetation, chipping the removed material and decking the boles (i.e., stacking the tree trunks). Chips would be spread over the treatment area and would not exceed 6 inches in thickness. Decked boles would be located within the treatment area and in strategic locations away from the road to minimize visibility. The landowner would process the boles in the future.

1.4.2 Phase II Biomass Disposal

The proposed Phase II mechanical vegetation treatments would mulch much of the vegetative debris using masticators and place it on the ground concurrently with vegetation removal. Biomass generated from treatments would primarily be disposed of by chipping and spreading on site (95 percent of biomass). Chipped biomass would be spread over the treatment area and would not exceed 6 inches in thickness. The remaining biomass (approximately 5 percent) would be lopped and scattered within the treatment areas.

1.5 TREATMENT MAINTENANCE

Maintenance treatments are expected to occur on an annual basis by the landowners. Periodic maintenance would occur as needed, determined by qualified staff who would monitor the project. Following Phase I initial treatment, site conditions are expected to resemble a meadow-like setting, with recovering vegetation returning following the CZU Lightning Complex Fire, allowing for space for the naturally regenerating Monterey pine to acquire the available nutrients, water, and sunlight. Following Phase II implementation, site conditions are expected to have a clear, open understory, free of ladder fuels, with adequate spacing between the individual Monterey pines that would promote a healthier, more vigorous forest. An open understory would create a mosaic of fuel continuity that would support wildlife habitats and the regeneration

of native species. Maintenance intervals would be dependent on the reestablishment rate of the understory species and would be triggered by the occurrence of dense, continuous understory and ladder fuels. Maintenance treatments would be conducted through the implementation of mechanical and manual treatments to treat hazard trees, understory vegetation and ladder fuels, and reduce the re-establishment of invasive species. Herbicides may also be used to treat invasive species if needed, as described under Section 1.3.3, "Herbicide Application – Phase II" above. All maintenance treatments would occur during daytime hours.

1.6 PESTS, DISEASE, AND INVASIVE SPECIES

The pathogen, *Phytophthora ramorum*, commonly referred to as Sudden Oak Death (SOD), infects coastal forests throughout California and Oregon and kills susceptible species including tanoak, coast live oak, California black oak, Shreve's oak, canyon live oak, and madrone saplings. Host species that are in the treatment area include, but are not limited to California bay laurel, coast redwood, and Douglas fir. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, all hand equipment and boots worn by treatment crews would be sanitized and heavy equipment hosed off before operations in areas where the spread of SOD is possible. The California Oak Mortality Task Force website contains additional information regarding treatment and disposal measures for plants infected with SOD, which would be monitored for changes in SOD treatment recommendations (http://www.suddenoakdeath.org/).

The fungal disease, *Fusarium circunatum*, commonly referred to as Pitch canker, affects many pine species and can infect Douglas fir. Most pines native to California are susceptible to pitch canker, but Monterey pine is the most widely affected host. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, the same measures as described above to prevent the spread of SOD would be implemented. The Pitch Canker Task Force has additional information regarding treatment and guidelines for handling woody material infected by pitch canker fungus, which would be monitored for changes in pitch canker treatment recommendations (https://ufei.calpoly.edu/pitch-canker-task-force/).

French broom is a problematic invasive species due to its ignitability, ability to carry fire into tree canopies, shading out seedlings, and replacing the native plants and forage species. This species has a large seed bank and re-sprouts readily from the root after cutting, freezing, and fire. The California Invasive Plant Council (Cal IPC) recommends pulling French broom to remove the entire plant including its roots to eliminate re-sprouting. The removal of this species is a priority due to its increased fire hazard and adverse impacts to habitat and aesthetics. Additional information about French broom control and treatments is located on the Cal IPC website, which would be monitored for changes in French broom treatment recommendations (https://www.calipc.org/plants/profile/genista-monspessulana-profile/ and https://wric.ucdavis.edu/information/natural%20areas/wr_G/Genista.pdf).

PROJECT DESCRIPTION FOR THE SKYLARK RANCH FOREST HEALTH PROJECT

The Skylark Ranch Forest Health Project (project or proposed project) consists of vegetation treatments at Skylark Ranch Girl Scout Camp (Skylark Ranch) in western Santa Cruz County. It is located approximately 2.5 miles east of State Route (SR) 1, 14.5 miles southeast of the city of Pescadero, and 26.6 miles northwest of the city of Santa Cruz (refer to Figure 1-1). The CalVTP treatments would occur within multiple treatment areas totaling 60 acres, all of which are within Santa Cruz County. The vegetation treatments are intended to reduce potential vegetative ignition sources, improve the forest's health and vigor, and improve the capacity for emergency response and wildfire suppression during a wildfire.

The CalVTP treatment types that would be implemented are ecological restoration and shaded fuel breaks, and the proposed treatment activities to implement the project are manual and mechanical treatments and herbicide application. The proposed CalVTP treatment areas are shown in Figure 1-2 and are summarized in Table 1-1, below.

Table 1-1 Proposed CalVTP Treatments

CalVTP Treatment Type	Treatment Description	CalVTP Treatment Activity	Treatment Size (acres)	Equipment Used for Treatments	Timing of CalVTP Treatments
Ecological Restoration	Habitat improvement/fire resiliency treatments	Manual and mechanical (cutting and masticating), and cut stump or foliar spray of herbicides	40	Chainsaws and/ or other mechanized hand tools, masticator, feller-buncher, skid steer, chipper (to chip biomass)	May 2022 – August 2022
Shaded Fuel Break	Treatment of areas along Old Woman's Creek Road and access roads with heavy brush	Manual and mechanical (cutting, masticating, and mowing), and cut stump or foliar spray of herbicides	20	Masticator, feller-buncher, skid steer, chainsaws, chipper (to chip biomass)	May 2022 – August 2022
Total Acres			60		

Source: Provided by Santa Cruz RCD in 2021

A masticator, feller-buncher, skid steer as well as chainsaws and other hand-held tools would be utilized to remove understory vegetation; dead or downed material; hazard trees; dead, dying, and diseased trees; and live trees up to 12 inches diameter at breast height (dbh). Manual treatment crews would also utilize chainsaws and other hand-held tools to prune trees and woody vegetation and buck downed debris and materials. All material would be masticated or chipped, described in section 2.3, "Biomass Disposal," below. Herbicide application may be utilized to eliminate the spread and re-sprouting of invasive species in the treatment areas predominately along roads and trails.

Initial treatments would occur over approximately 40 days, beginning in May 2022. However, the timeframe may change in the event of delays, such as weather. Treatment crews would consist of up to 10 people working within the treatment area at any one time. Treatment vehicle and equipment staging would occur within the designated treatment area. All work would occur during daytime hours.

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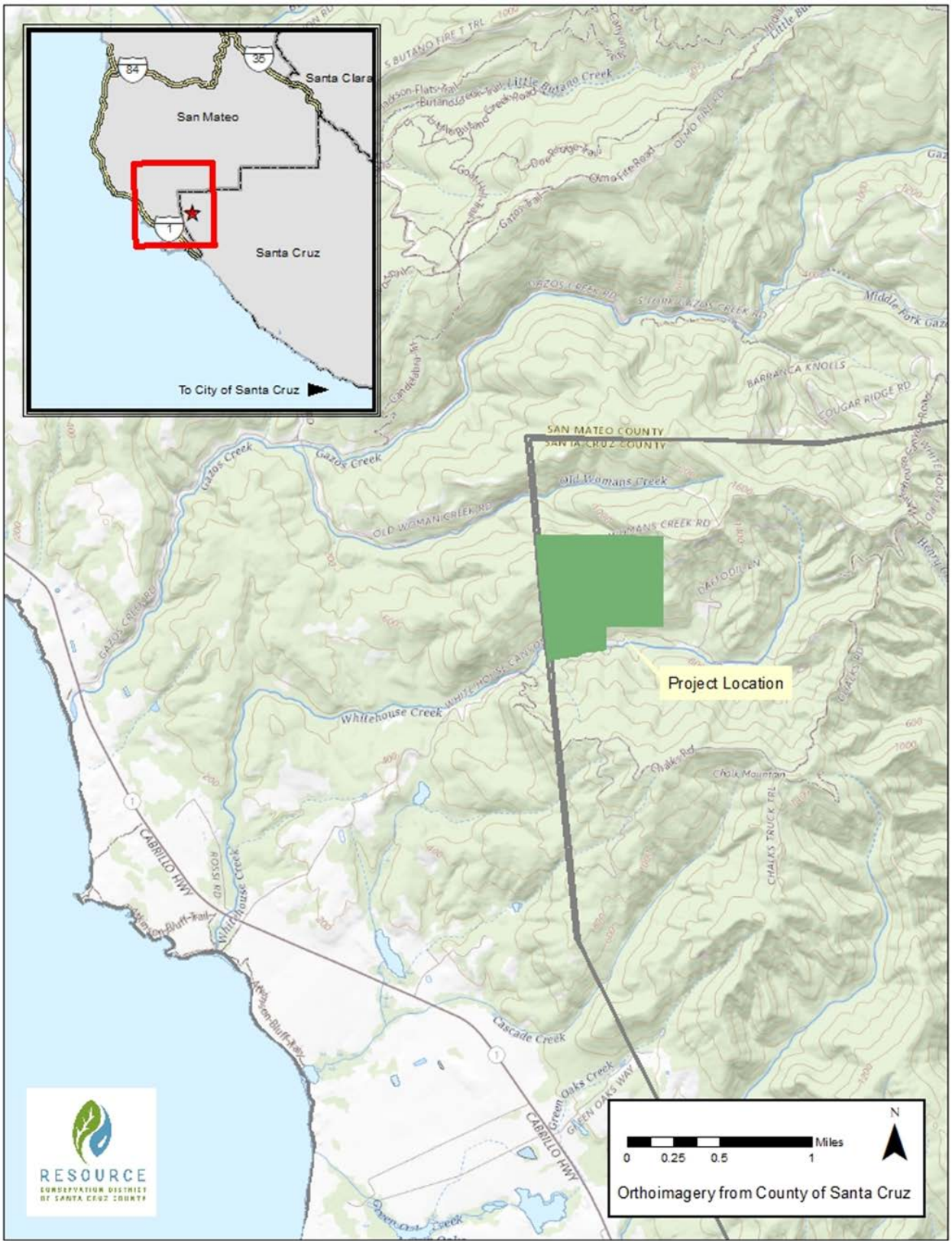


Source: Provided by Santa Cruz RCD in 2021

Figure 1-1 Project location

1.1 CalVTP TREATMENT TYPES

1.1.1 Ecological Restoration

The vegetation treatment areas have experienced a range of burn severities, from low to high severity burns, during the 2020 CZU Lightning Complex. Following the fires, much of the understory vegetation was not fully consumed and has added to the dry vegetative fuel load. The proposed project would implement ecological restoration treatments for the dual benefit of wildfire risk reduction and enhancement of natural habitats, particularly given the burned condition of much of the landscape. Consistent with the CalVTP ecological restoration treatment type, the RCD's proposed ecological restoration treatments would seek to return the landscape closer to natural conditions where natural fire processes can be reestablished and habitat quality can be improved, including controlling, and eliminating nonnative, invasive plants and excess buildup of fire fuel. Specific restoration objectives include restoring the natural ecosystem processes, conditions, and resiliency through the removal of dense understory fuels and invasive species, and reintroduction of native species through tree planting in areas generally outside the Wildland Urban Interface (WUI), as defined in the CalVTP PEIR (CalVTP Final PEIR Volume II pages 2-7, 2-15, and 2-16).

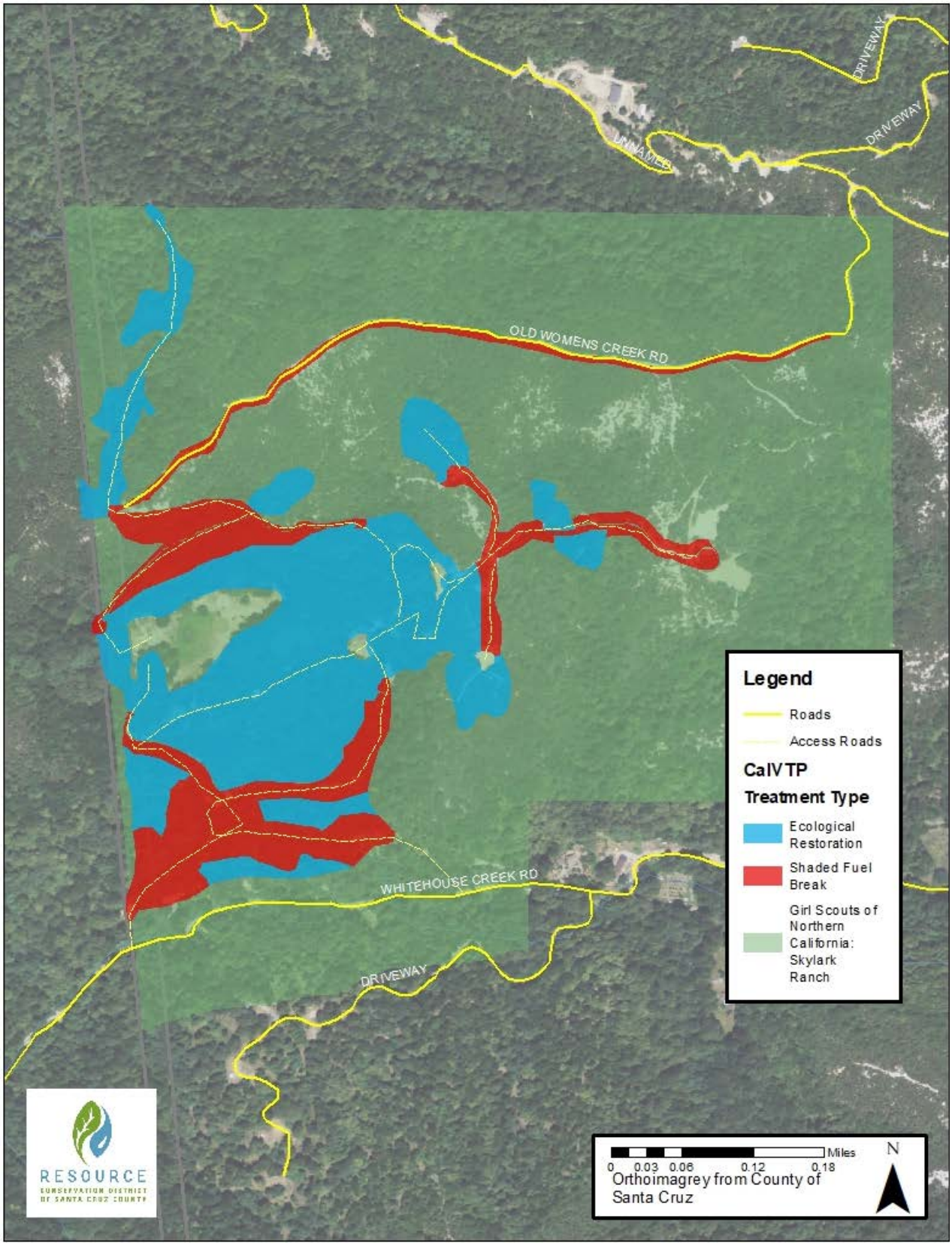
Ecological restoration treatments would occur over 40 acres of the treatment area and would be implemented using manual and mechanical treatment methods, including chainsaws and/or other mechanized hand tools, as well as masticators, skid steers, feller bunchers and chippers. Herbicides may also be used to prevent the growth of invasive vegetation. Implementing ecological restoration treatments would result in a modification of existing fuels that would provide excellent conditions for planting redwood seedlings and ultimately support native vegetative species regeneration to restore habitat conditions including, but not limited to habitat quality and natural fire processes. Ecological restoration treatments would focus on removing dead and dying vegetation, thinning small diameter live trees (i.e., less than 12 inches dbh), and understory vegetation to increase the site's carrying capacity for stand volume, which in turn would increase the growth and vigor or the remaining trees).

The excessive buildup of vegetation and dead and dying material following the 2020 CZU Lightning Complex has degraded conditions. Removing dead, dying, and diseased trees is expected to increase the growth and carbon storage capacity in the residual stand.

1.1.2 Shaded Fuel Break

In the past, areas along Old Woman's Creek Road functioned as a fuel break, but this fuel break was not actively maintained. This project proposes to reinstall and maintain a 10-acre shaded fuel break along Old Woman's Creek Road, as well as create another approximately 10 acres of shaded fuel breaks along roads and trails within the treatment area, including the Girls Scouts of Northern California's driveway, access roads, and walking trails, including the access road to the horse paddock and access to water systems (see Figure 1-2). As defined in the CalVTP PEIR, fuel breaks remove zones of vegetation to support fire suppression efforts and passively interrupt the path of a fire (CalVTP Final PEIR Volume II page 2-7 and 2-11 through 2-13).

Old Woman's Creek Road connects White House Creek Canyon to Old Woman's Creek Canyon and Gazos Creek Canyon. Implementing a shaded fuel break along the ridgetop to the north of the Skylark Ranch property would reduce the threat of catastrophic wildfire to the camp and would protect the surrounding community members that live in these three rural canyons. The shaded fuel breaks would provide emergency responders the opportunity to control or contain wildfires through the modification of flammable vegetation while supporting a healthy and fire resilient residual forest stand through retaining the majority of the overstory canopy to maintain the shade that will reduce the potential for rapid re-growth of understory vegetation. The shaded fuel breaks would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, skid steers, and feller bunchers. Herbicides may also be used to prevent the growth of invasive vegetation.



Source: Provided by Santa Cruz RCD in 2021

Figure 1-2 Proposed CalVTP Treatments

1.2 CalVTP TREATMENT ACTIVITIES

The proposed project would implement ecological restoration and fuel break treatments for the purposes of wildfire risk reduction and the enhancement of natural habitats and forest functions. The vegetation treatment activities that would be used are manual and mechanical treatments, and herbicide application. Each of these activities are described in more detail below.

1.2.1 Mechanical Vegetation Treatment

Mechanical treatments would occur on up to 60 acres and would primarily include skidding, masticating, and chipping target vegetation. Mechanical treatment activities would occur predominately on slopes below 40 percent, along ridges, and may occur on slopes greater than 40 percent by using equipment that can reach target vegetation from existing road infrastructure. Masticators would be used to remove dense stands of understory vegetation and ladder fuels and maintain a healthy overstory. As stated in the CalVTP PEIR Section 2.5.2, mechanical treatments may cut, uproot, crush/compact, or chop existing vegetation through the use of masticators and other methods of application. Understory vegetation, brush, and shrubs under the drip lines of trees shall be cut and masticated leaving root systems intact for resprouting. Understory debris would be chipped and scattered onsite within the treated areas, following best management practices for reducing the spread of pests, disease, and invasive species (see Section 1.5, "Pests, Disease, and Invasive Species" below).

Generally, mechanical treatments would:

- remove dead and dying vegetation;
- remove invasive trees, all sizes (e.g., Eucalyptus); and
- remove or masticate target vegetation 12 inches dbh or less.

1.2.2 Manual Vegetation Treatment

Manual treatments would be implemented exclusively on approximately 10 acres and could be used on up to 60 acres (i.e., where manual and mechanical treatments would be used in combination). To implement manual treatments, hand tools and hand-operated power tools, including chainsaws, would be used to cut, clear, or prune herbaceous or woody species and ladder fuels. Manual treatments would occur predominately on slopes less than 40 percent; however, some manual treatments would occur on steep sleeps between approximately 40-50 percent. The same general guidelines for tree and vegetation removal and retention would be followed as described above for mechanical treatments.

1.2.3 Herbicide Application

Herbicides would be used to prevent the spread and the re-sprouting of invasive species in the treatment areas, predominately along roads. During the initial treatments, herbicide use would be used to control invasive vegetation and prevent regrowth of invasive tree species, such as Tasmanian blue gum (*Eucalyptus globulus*), after their removal. Other target vegetation includes French broom and pampas grasses. Herbicide application would also occur over the treatment areas during maintenance treatments to control understory vegetation and ladder fuels and reduce the reestablishment of invasive species if it is determined to be the least environmentally disturbing activity to aid in reaching future desired conditions. A certified pesticide applicator was consulted to determine the list of potential herbicides and application methods that would be used for the project.

Consistent with the CalVTP (CalVTP Final PEIR Volume II pages 2-27 and 2-28), the herbicides proposed for use are glyphosate, triclopyr, and hexazinone. Herbicides would only be applied directly by hand via cut stump, spot, or foliar spray. Herbicide application would 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. Use of herbicides would be excluded from areas with open water bodies. In addition, both glyphosate and triclopyr are subject to the California Red-Legged Frog Injunction (Center for Biological Diversity v. U.S. EPA [2006] Case No. 02-1580-JSW), and therefore, specific application requirements apply. For localized spot treatments using handheld devices on roadsides and in forests, the application of glyphosate and triclopyr are prohibited within 60 feet of California red-legged frog aquatic breeding critical habitat or non-breeding aquatic critical habitat within critical habitat areas or within 60 feet of aquatic features within the non-critical habitat sections subject to the injunction. The RCD would comply with all laws and regulations governing the use of herbicides.

1.3 BIOMASS DISPOSAL

The proposed mechanical vegetation treatments described above will mulch much of the vegetative debris using a masticator and place it on the ground concurrently with vegetation removal. Additional biomass generated from the CalVTP treatments would primarily be disposed of by chipping. Chipped biomass would be spread over treatment areas and would not exceed 6 inches in thickness/depth. The remaining biomass (approximately 5 percent) would be lopped and scattered within the treatment areas.

1.4 TREATMENT MAINTENANCE

Maintenance treatments are expected to occur on an annual basis by the landowners. Periodic maintenance will occur as needed, determined by qualified staff who will monitor the project. Following initial treatment, site conditions are expected to have a clear, open understory that would promote a healthier, more vigorous forest. An open understory would create a mosaic of vegetation that would support wildlife habitats and the regeneration of native species. Maintenance intervals would be dependent on the reestablishment rate of the understory species and would be triggered by the occurrence of dense, continuous understory and ladder fuels. Maintenance treatments would be conducted through the implementation of mechanical and manual treatments to treat hazard trees, understory vegetation and ladder fuels, and reduce the reestablishment of invasive species. Herbicides would also be used to treat invasive species as needed, as described under Section 1.2.3, "Herbicide Application" above. All maintenance treatments would occur during daytime hours.

1.5 PESTS, DISEASE, AND INVASIVE SPECIES

The pathogen, *Phytophthora ramorum*, commonly referred to as Sudden Oak Death (SOD), infects coastal forests throughout California and Oregon and kills susceptible species including tanoak, coast live oak, California black oak, Shreve's oak, canyon live oak, and madrone saplings. Host species that are in the treatment area include, but are not limited to California bay laurel, coast redwood, and Douglas fir. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, all hand equipment and boots worn by treatment crews will be sanitized and heavy equipment hosed off prior to operations in areas where the spread of SOD is possible. The California Oak Mortality Task Force website contains additional information regarding treatment and disposal measures for plants infected with SOD, which would be monitored for changes in SOD treatment recommendations (http://www.suddenoakdeath.org/).

The fungal disease, *Fusarium circunatum*, commonly referred to as Pitch canker, affects many pine species and can infect Douglas-fir. Most pines native to California are susceptible to pitch canker, but Monterey pine, *Pinus radiate*, is the most widely affected host. In addition to applicable CalVTP SPRs and mitigation measures that would be implemented, and to avoid the spread of this pathogen, the same measures as described above to prevent the spread of SOD would be implemented. The Pitch Canker Task Force has additional information regarding treatment and guidelines for handling woody material infected by pitch

canker fungus, which would be monitored for changes. in pitch canker treatment recommendations (https://ufei.calpoly.edu/pitch-canker-task-force/).

French broom, *Genista monspessulana*, is a problematic invasive species due to its ignitability, ability to carry fire into tree canopies, shading out seedlings, and replacing the native plants and forage species. This species has a large seed bank and re-sprouts readily from the root after cutting, freezing, and fire. The California Invasive Plant Council (Cal IPC) recommends pulling French broom to remove the entire plant including its roots to eliminate re-sprouting. The removal of this species is a priority due to its increased fire hazard and adverse impacts to habitat and aesthetics. Additional information about French broom control and treatments is located on the Cal IPC website, which would be monitored for changes in French broom treatment recommendations (https://www.calipc.org/plants/profile/genista-monspessulana-profile/ and https://wric.ucdavis.edu/information/natural%20areas/wr_G/Genista.pdf).

Appendix E

Example Letter to Geographically Affiliated Tribes

December 2, 2021

Name of Tribal Government Representative
Name of Tribe
Mailing Address provided by most current Native American Heritage Commission Contact List

RE: Resource Conservation District (RCD) of Santa Cruz County's Skylark Ranch Forest Health Project, Santa Cruz County

Dear Tribal Representative,

Greetings!

On behalf of the RCD, Ascent Environmental, Inc is conducting the cultural resources background investigation for the Skylark Ranch Forest Health Project located in Santa Cruz County. This is one of several forest health projects RCD will be contacting tribes about in Santa Cruz County.

The Resource Conservation District (RCD) of Santa Cruz County is proposing the Skylark Ranch Forest Health Project (project). The project is seeking California Environmental Quality Act (CEQA) compliance as a later activity covered by the Program Environmental Impact Report (PEIR) for the California Vegetation Treatment Program (CalVTP), using its Project-Specific Analysis checklist; the CalVTP PEIR was certified in December 2019. Consultation pursuant to Public Resources Code section 21080.3.1 was completed during preparation of the CalVTP PEIR; this notice serves to request additional information regarding potential impacts to tribal cultural resources from the proposed treatment actions, as required by CalVTP Standard Project Requirement CUL-2. Information concerning the CalVTP, and its requirements can be found here: https://bof.fire.ca.gov/projects-and-programs/calvtp/.

The Skylark Ranch Forest Health Project (project) intends to apply vegetation treatments to 60 acres of property within the Girl Scouts of Northern California Skylark Ranch in western Santa Cruz County. The ranch is located approximately 2.5 miles east of State Route 1, 14.5 miles southeast of the city of Pescadero, and 26.6 miles northwest of the city of Santa Cruz (see Figure 1). The treatments on a total of 60 acres at multiple locations across the ranch. The project location corresponds to Franklin Point quadrangle USGS 7.5' topographic map T 9S, R 4W, Sections 4 and 9.

The project area tree canopy is dominated by second growth coastal redwood, Douglas-fir, and mixed hardwood forests. The understory is comprised of native brush and shrub species, such as huckleberry, poison oak, and manzanita. French broom is also a common invasive species located within the project area. Following the 2020 CZU Lightning Complex fires, not all of the understory vegetation was consumed within the project area, leaving it with a heavy dry brush fuel load and young small diameter trees. Thus, the purpose of the project is to reduce wildfire risk by removing hazardous fuel loads and to enhance the natural habitat through ecological restoration treatments.

Proposed CalVTP Treatment Types

Ecological Restoration. Consistent with the CalVTP ecological restoration treatment type, the RCD's proposed ecological restoration treatments would seek to return the landscape to natural ecosystem processes, conditions, and resiliency through the removal of dead and dying trees, dense understory fuels, and invasive species. Ecological restoration treatments would occur over 40 acres of the treatment area (see Figure 2), and would focus on removing dead and dying vegetation, thinning small diameter live trees (i.e., equal to or less than 12 inches DBH), and understory vegetation to increase the site's carrying capacity for stand volume, which in turn would increase the growth and vigor or the remaining trees.

Ecological Restoration would be implemented using manual and mechanical treatment activities, including equipment such as chainsaws, masticators, feller-bunchers, skid steers, and chippers. Herbicides may also be used to prevent the growth of, or to remove invasive vegetation.

Shaded Fuel Break. As defined in the CalVTP PEIR, fuel breaks remove zones of vegetation to support fire suppression efforts and passively interrupt the path of a fire. Shaded fuel breaks would also provide access and staging for emergency responders. The project proposes to reinstall a 10-acre shaded fuel break along Old Woman's Creek Road as well as new shaded fuel breaks along ancillary roads, access roads, and trails across another 10 acres of treatment area, including the Skylark Ranch driveway.

The shaded fuel break would be created by manual and mechanical treatment activities using equipment such as chainsaws, masticators, feller-bunchers, skid steers, chippers, and by mowing. Cut-stump and foliar herbicides may also be used to prevent the growth of or remove invasive vegetation.

Proposed CalVTP Treatment Activities

Mechanical Vegetation Treatment. Mechanical treatments would occur on up to 60 acres and would primarily include skidding, masticating, and chipping target vegetation. Mechanical treatment activities would occur predominately on slopes below 40 percent, along ridges, and may occur on slopes greater than 40 percent by using equipment that can reach target vegetation from existing road infrastructure. Masticators would be used to remove dense stands of understory vegetation and ladder fuels. Understory vegetation, brush, and shrubs under the drip lines of trees shall be cut and masticated leaving root systems intact for resprouting. Understory debris would be chipped and scattered onsite within the treated areas, following best management practices for reducing the spread of pests, disease, and invasive species.

Generally, mechanical treatments would:

- remove dead and dying vegetation;
- remove invasive trees of all sizes (e.g., Eucalyptus); and
- remove or masticate target vegetation 12 inches DBH or less.

Manual Vegetation Treatment. Manual treatments would be implemented exclusively on approximately 10 acres and could be used at various locations on the remaining 50 acres where manual and mechanical treatments would be used in combination. To implement manual treatments, hand tools and hand-operated power tools, including chainsaws, would be used to cut, clear, or prune herbaceous or woody species and ladder fuels. Manual treatments would occur predominately on slopes less than 40 percent; however, some manual treatments would occur on steep sleeps between approximately 40-50 percent. The same general guidelines for tree and vegetation removal and retention would be followed as described above for mechanical treatments.

Herbicide Application. Herbicides would be used to eliminate the spread and the re-sprouting of invasive species in the treatment areas predominately along roads. During the initial treatments, herbicide use would be focused on the removal of invasive tree species, such as Eucalyptus globulus (Tasmanian blue gum). Other target vegetation includes French broom and pampas grasses. Herbicide application would also occur over the treatment areas during maintenance treatments to control understory vegetation and ladder fuels and reduce the re-establishment of invasive species if it is determined to be the least environmentally disturbing activity to aid in reaching future desired conditions. A certified pesticide applicator was consulted to determine the list of potential herbicides and application methods that would be used for the project.

Consistent with the CalVTP, the herbicides proposed for use are glyphosate, triclopyr, and hexazinone. Herbicides would only be applied directly by hand via cut stump, spot, or basal soil treatment or by foliar spray. Herbicide application would 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. Use of herbicides would be excluded from areas with open water bodies.

Biomass Disposition. Biomass generated from the treatments would primarily be disposed of by chipping (95 percent of biomass) and would be spread over the treatment area. Biomass dispersion would not exceed 6 inches in thickness. The remaining biomass (approximately 5 percent) would be lopped and scattered within the treatment area.

Timing

Treatments would occur over approximately 40 days, beginning in May 2022. However, the timeframe may change in the event of delays, such as weather events or production rates. Treatment crews would consist of up to 10 people working within the treatment area at any one time. Treatment vehicle and equipment staging would occur within the designated treatment area.

Request for Information

The Native American Heritage Commission has identified you as someone who may have information concerning cultural resources that could be present in the project area. Please respond to this email or in writing to the physical address below, by December 16, 2021 (i.e., within 14 days of your receipt of this notice), if your Tribe has any information or concerns related to the project that you would like to share. If standard mail is to be used, the letter must be postmarked by December 16, 2021. Please be advised that the result of the Sacred Lands File query conducted through the Native American Heritage Commission on November 7, 2021, was negative.

Here is the address for a written reply:

Ascent Environmental, Inc.
Attn: Emilie Zelazo- Environmental Planner/Cultural Resource Specialist
c/o: Lily Bostrom, Senior Environmental Planner
455 Capitol Mall, Suite 300
Sacramento, CA 95814

Thank you for your time and attention.
Sincerely,

Emilie Zelazo

Emilie Zelazo, R.P.A.

Environmental Planner and Cultural Resource Specialist

C 916.720.1918
E Emilie.Zelazo@AscentEnvironmental.com

Ascent Environmental, Inc
455 Capitol Mall, Suite 300
Sacramento, CA 95814
O 916.444.7301

Enclosed: Proposed Project Area Maps

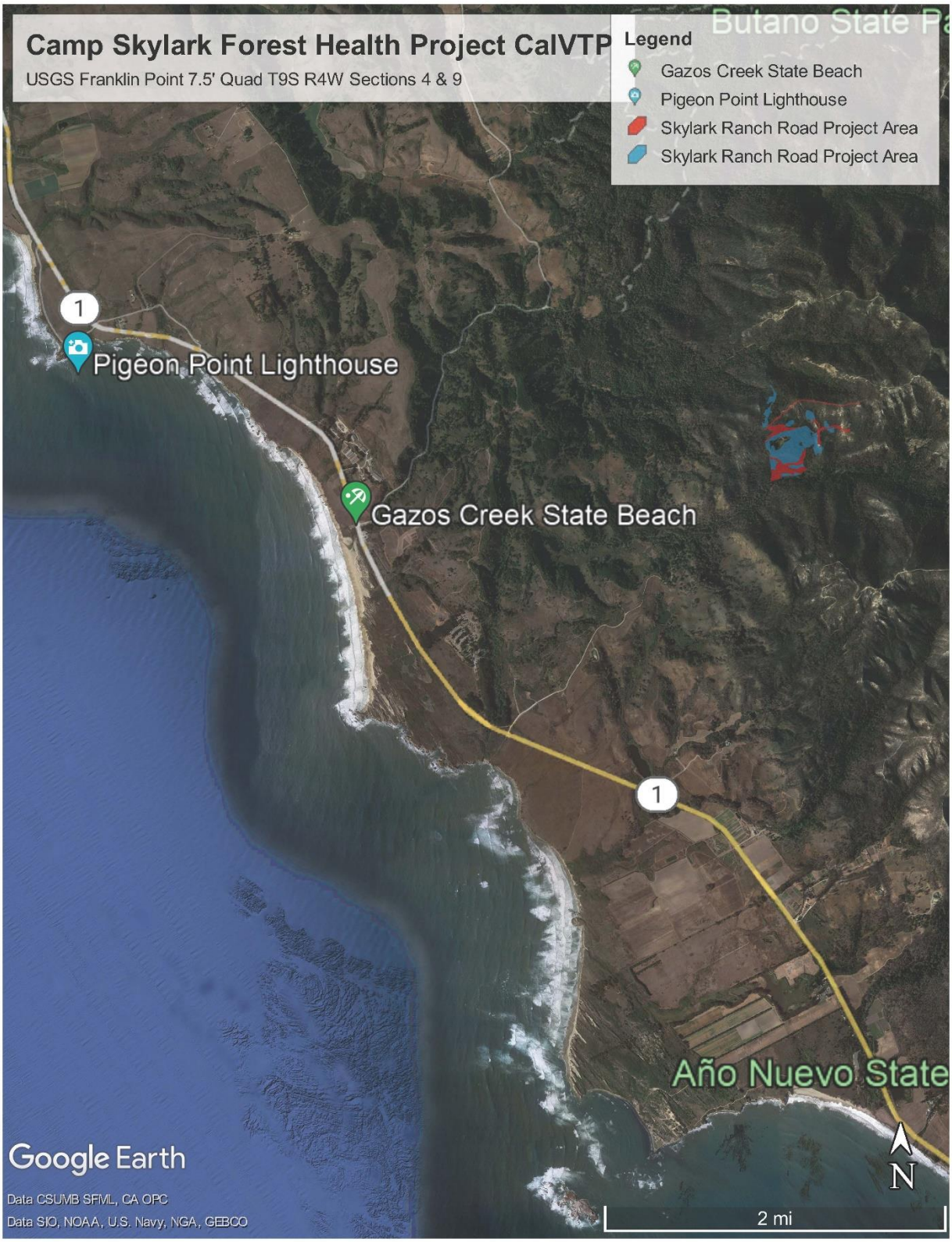
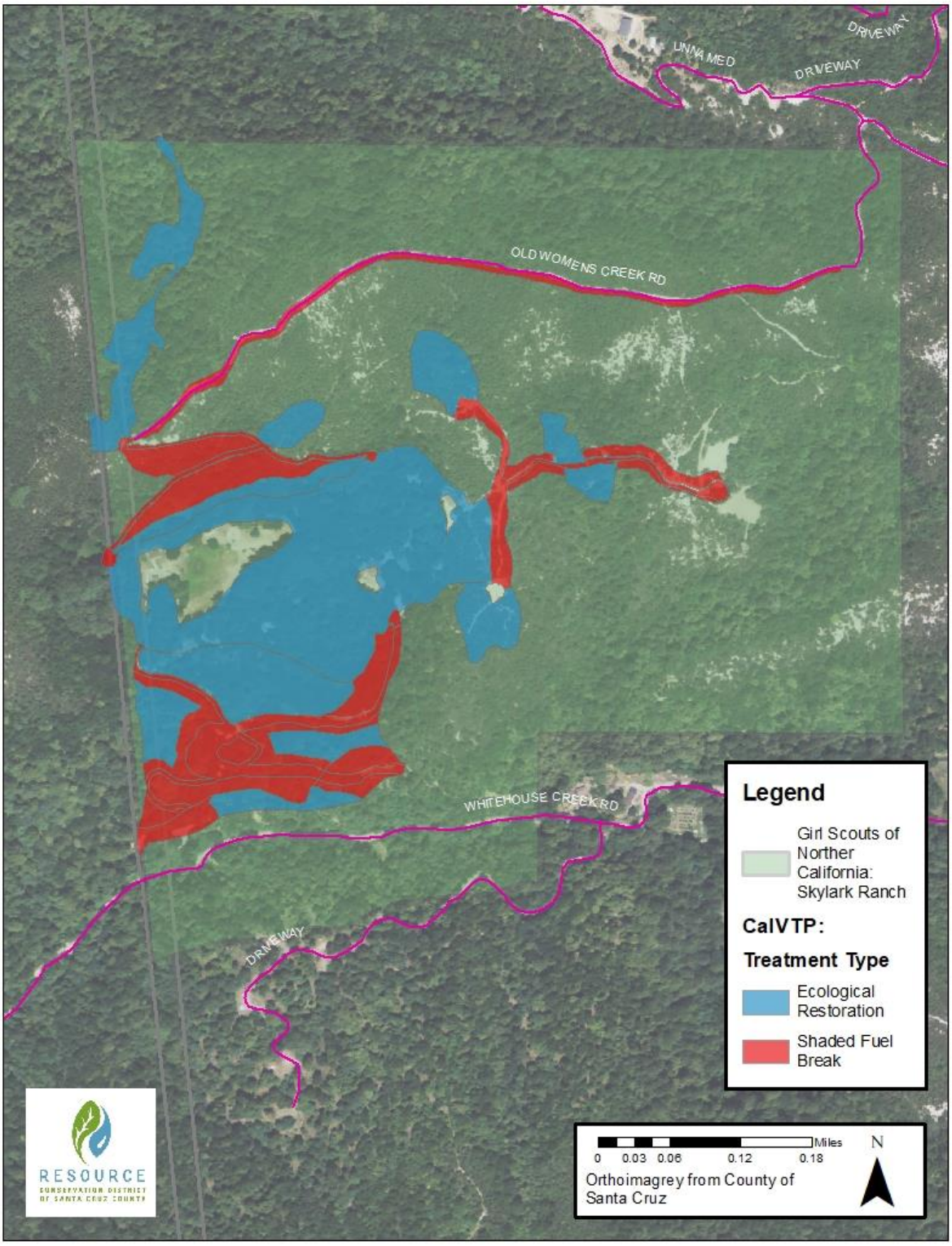


Figure 1 Skylark Ranch Forest Health Project Vicinity Map



Source: Provided by Santa Cruz RCD in 2021

Figure 2 Skylark Ranch Forest Health Project Location Map

Appendix F

Coastal Vegetation
Treatment Standards

Coastal Vegetation Treatment Standards
Skylark Ranch Forest Health Project

1. All projects shall comply with and carry out the requirements of the CalVTP PEIR, including use of approved treatment methods, treatment activities, and all applicable standard project requirements (SPRs).

   Response: The Skylark Ranch Forest Health Project (project) will comply with the applicable requirements of the CalVTP PEIR. The Project-Specific Analysis (PSA) prepared for the project provides the details regarding the CalVTP treatment types and activities that would be implemented under the project, and the applicable SPRs and mitigation measures that would be implemented. As evidenced therein, the project complies with and will carry out the applicable requirements of the CalVTP PEIR.

2. Project-Specific Analyses (PSAs) shall be submitted to the California Coastal Commission (CCC) for review and approval pursuant to the PWP prior to conducting projects. Coordination between the RCD and CCC shall occur as early as feasible in the design process in order to avoid delays related to Coastal Act consistency.

   Response: The PSA for the Skylark Ranch Forest Health Project was submitted to the CCC for review on January 27, 2022. Prior to submitting the PSA, RCD staff conducted a site visit to the Skylark Ranch treatment area with CCC staff on October 15, 2021. A follow up conference call with CCC staff was held on November 9, 2021. During this meeting, the treatment approach for the project was discussed, including existing site conditions, a description of the initial and maintenance treatments, and the proposed approach to the analysis.

3. PSAs shall include clear problem and goal statements (i.e., overall project goals, fire prevention goals, ecological goals, etc.) associated with each project proposed pursuant to this PWP. These statements are intended to assist the RCD and CCC in developing mutual understanding of the potential impacts and benefits – both short and long term – for each project. It is expected that this information will be incorporated into item #6 of each PSA.

   Response:

   Problem Statement: The forests in the Santa Cruz Mountains have significantly changed over the past two centuries, due to historic logging practices, land development, and in large part, decades of fire suppression. The lack of natural process in these forests has resulted in excessive fuel buildup and infestation of invasive plant species that are out-competing native vegetation. These conditions, coupled with extreme drought, a warming climate, arid site-adapted conifer species displacing hardwoods and other sensitive species, are reducing biodiversity and altering natural fire regimes. The result has been damaging to this ecosystem and will require environmentally sensitive management to redirect the path of changing climates and adverse ecological conditions.

   Most notably for San Mateo and Santa Cruz County in 2020, the CZU Lightning Complex burned 86,509 acres, destroyed 1,490 buildings, and exhibited extreme fire behavior. Initial estimates suggest that over 50 percent of the impacted area burned at high fire severities. The lack of natural processes, fire suppression, fuel build up, and invasive species infestations described above

provided ideal conditions for the extreme fire behavior and extensive damage that resulted from the 2020 CZU Lightning Complex. Many forested stands that were topographically exposed to the extreme fire weather resulted in significant extensive tree mortality and habitat losses that will take decades to recover.

Prior to the 2020 CZU Lightning Complex, forest stands at Skylark Ranch exhibited unhealthy characteristics (e.g., excessive ladder fuels, overly dense mid-diameter trees) that were susceptible to disease and a catastrophic wildfire. Coastal scrub portions of Skylark Ranch may have been outside of the natural fire return interval based on the last recorded fire in the area being in 1962 and the natural fire return interval for coastal scrub communities in the regions, as described in the CalVTP PEIR and Manual of California Vegetation being between 20 to 70 years, depending on the specific vegetation alliances and associations present.

Following the 2020 CZU Lightning Complex, some of the excessive and overly dense vegetation remains unconsumed in forested portions of the proposed treatment area resulting in a lack of proper ecosystem function and degraded habitat. In other portions of the proposed treatment area, the 2020 CZU Lightning Complex resulted in an abundance of dead and dying material that increases the fuel loads available for future fires, and presents fall hazards and potential obstacles for the ingress and egress of campers and camp staff (see Figure 1-2 and 1-3 in the PSA). Vegetation that was present prior to the 2020 CZU Lightning Complex is shown in Figure 1-4 in the PSA. The Tree mortality for Douglas-fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), knobcone pine (*Pinus attenuata*), and madrone (*Arbutus menziesii*) in the treatment area is expected to be between 60 to 100 percent. Some larger diameter oak trees will likely survive but most likely with a high degree of damage. There is a small area of redwoods (*Sequoia sempervirens*) that are expected to experience 75 to 95 percent mortality. Many redwoods greater than 12-inches diameter at breast height (dbh) in this area have a much higher chance for long-term survival. In general, the redwood forest within Skylark Ranch exhibits ecologically resilient characteristics as evidenced by the post-burn survival of scattered old growth trees and remnants of a diverse understory. Without treatment, it is anticipated that the re-establishment of vegetation within Skylark Ranch would result in unhealthy ecosystem conditions (e.g., overly dense trees) similar to what was present prior to the 2020 CZU Lightning Complex.

Goal Statement: This project supports the intent of CAL FIRE's Forest Health Program goals, California's climate goals, and the goals of the California Coastal Commission (CCC) for Environmentally Sensitive Habitat Areas (ESHA) where ecological restoration treatment types may occur to:

- Proactively restore forest health, improve ecosystem resiliency, and conserve working forests by conducting ecologically minded forest health treatments.
- Protect state water supply sources by strategically implementing ecological restoration projects across priority watersheds.
- Encourage the long-term storage of carbon in forest trees and soils through the reduction of dense understory thus promoting larger healthier stands of mature trees.
- Minimize the loss of forest carbon from large, intense wildfires, through reduction of ladder fuels and brush resulting from years of fire suppression.
- Promote public safety, health, and welfare and protect public and private property through the implementation of ecologically restorative fuel reduction treatments in the wildland urban interface.

The goal of the ecological restoration treatments within forested habitats is to establish an open, healthy and diverse understory by allowing sunlight to penetrate to the forest floor after removing dead and dying trees and thinning smaller diameter trees. This understory would be composed of a mosaic of vegetation that would support wildlife habitats and the regeneration of native species. Forest growth that exceeded 600 stems per acre prior to the 2020 CZU Lightning Complex would be reduced to approximately 200 stems per acre of mid-range and larger diameter trees, which research has shown to provide the most flexibility for future planning while managing a third growth coast redwood forest. Remaining trees would extend their heights and expand their crowns, becoming more vigorous and able to resist manifestations of climate change while reducing the continuity of hazardous ladder fuels to the canopy. The goal of ecological restoration treatments in coastal scrub and chaparral communities is to allow for natural post fire re-establishment and successional stages of vegetation alliances that existed prior to the 2020 CZU Lightning Complex. The future desired condition consists of multiple age classes and spacing of native shrubs that will, through ongoing maintenance treatments over the life of the PSA, approximate conditions of healthy, mature reference stands of the vegetation alliances determined to be present once post-fire regrowth has occurred to the extent that vegetation can be identified to the alliance level according to the Manual of California Vegetation.

The goal of the shaded fuel break treatments is to remove dead but unconsumed trees, many in the 2-to-20-inch dbh classes and provide emergency responders the opportunity to control or contain wildfires through the modification of flammable vegetation. Treatments would also support a healthy and fire resilient residual forest stand through retaining the majority of the overstory canopy to maintain the shade that will reduce the potential for rapid re-growth of understory vegetation.

The desired condition following treatment would be re-establishment of the existing vegetation communities and appropriate seral-stage communities within the treatment area, at densities that reflect natural processes that have been altered by the history of logging and fire suppression. Environmental protections, including SPRs and mitigation measures, would be implemented by the project proponent and reported through the Mitigation Monitoring and Reporting Program developed as part of an approved PSA under the CalVTP PEIR.

4. In the coastal zone, vegetation treatment projects fall into two categories: (1) Forest Health projects and (2) Fire Prevention projects. The purpose of forest health projects is to restore and enhance ecosystems, including to prevent fire behavior to which the ecosystem is not adapted. The ecosystems that can be treated under this category include forested ecosystems as well as other ecosystems such as woodland and scrub dominated systems. The purpose of fire prevention projects is to protect existing structures and infrastructure, including access roads. Fire prevention projects shall be limited to the applicable defensible space requirement (which is typically 100 feet but can range to as much as 300 feet under specific circumstances), unless accompanied by a clear rationale, provided by a qualified professional, as to why additional defensible space is required to protect existing structures and infrastructure.

   Response: The project is first and foremost a forest health project; however, it has added benefits of fire prevention. Therefore, it falls under both the Forest Health and Fire Prevention project categories of the PWP. Ecological restoration treatments would restore the natural ecosystem processes, conditions, and resiliency through the removal of the degraded overstory of standing dead, dying, and irreversibly diseased woody vegetation (e.g., seriously infected with pathogens

such as sudden oak death [*Phytophthora ramorum*] and pitch canker [*Fusarium circunatum*]). Invasive species such as Tasmanian blue gum (*Eucalyptus globulus*), French broom (*Genista monspessulana*), and pampas grass (*Cortaderia selloana*) would also be removed.

Approximately 20 acres of shaded fuel break treatments would also be implemented. A 10-acre fuel break along Old Woman's Creek Road would be created and 10 acres of shaded fuel breaks along additional roads and trails within the treatment area would be created, including the along the camp's driveway, access roads, and walking trails. The fuel break treatments would retain the majority of the overstory canopy to maintain shade, thereby reducing the potential for rapid regrowth of understory vegetation. This approach would support a healthy and fire resilient residual forest stand while also providing emergency responders the opportunity to control or contain wildfires through the modification of flammable vegetation.

5. In the coastal zone, environmentally sensitive habitat area (ESHA) is defined as any area in which plant or animal life, or their habitats, are either rare or especially valuable because of their special nature or role in an ecosystem, and that could be easily disturbed or degraded by human activities and developments (see Public Resources Code Section 30107.5). Rarity determinations for habitats and species are made by CDFW, USFWS, and CNPS, and are used to support an ESHA determination by the CCC. In addition, an ESHA determination may be made on the basis of an area constituting "especially valuable habitat'" where it is of a special nature and/or serves a special role in the ecosystem, such as providing a pristine example of a habitat type or supporting important ecological linkages. The Coastal Act requires that ESHA be protected against any significant disruption of habitat values and only allows uses dependent on the ESHA resources within those areas (see Public Resources Code Section 30240). It is anticipated that many of the Forest Health and Fire Prevention activities pursued within the coastal zones of these two counties will take place within natural communities that qualify as ESHA (e.g., Redwood forest, Monterey Pine forest, Douglas Fir/Tan Oak forest, etc.).

   Response: The treatment area occurs within vegetation communities that are assumed to meet the definition of ESHA. However, as described above in the response to item #3, the 2020 CZU Lightning Complex burned through the vegetation in the treatment area altering the habitats and vegetation communities that existed prior to the fire. The primary purpose of the project is to conduct ecologically restorative treatments following the 2020 CZU Lightning Complex by removing dead, dying, and irreversibly diseased trees and reducing tree density to improve habitat conditions, allowing for growth of larger, healthier trees and more diverse understory vegetation, which would directly benefit ESHA. The project was designed to provide for a mosaic of appropriate native plants by age, size, and class that would support the overall habitat as detailed in response to item #6 (d) below. In addition, the CalVTP PSA includes SPRs and mitigation measures that would avoid and minimize significant impacts to ESHA and associated habitat values. Specifically, SPR BIO -8 would be implemented and contains the following requirements to protect ESHA by protecting the habitat functions that define ESHA within the treatment area.

   - Treatments must be designed in compliance with the LCP to protect the habitat function of the affected ESHA, protect habitat values, and prevent loss or type conversion of habitat and vegetation types that define the ESHA, or loss of special-status species that inhabit the ESHA.
   - Treatment actions are limited to eradication or control of invasive plants, removal of uncharacteristic fuel loads (e.g., removing dead, irreversibly diseased, or dying vegetation),

trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the vegetation types present in the ESHA.

- A qualified biologist or registered professional forester familiar (RPF) with the ecology of the treatment area will monitor all treatment activities in ESHA.

Please refer to the response to item #6 below and Impact BIO-3 in the PSA for more details on ESHA and habitat types within the treatment area, as well as additional measures that will be implemented to protect the ecosystem.

6. In addition to the requirements of the CalVTP PEIR, the following standards shall also be met in the coastal zone:

   Protect Ecosystem. Forest Health projects shall: (a) proactively restore and enhance ecosystems and forests, protect watersheds, and promote long-term storage of carbon, including through the minimization of forest carbon loss from large and intense wildfires; (b) restore and maintain vegetation cover to a threshold that reflects appropriate fire frequencies (i.e., fire-return intervals) on the landscape, considering estimated pre-European settlement conditions as well as future climate change, and the maintenance or improvement of ecosystem health; (c) maintain vegetation cover and composition to comply with the standards (membership rules) set forth in the second edition of the Manual of California Vegetation (MCV2) to avoid unintended habitat conversion; and (d) provide for a mosaic of appropriate native plants by age, size, and class that support the overall habitat function. Fire Prevention projects shall meet all of the above requirements to the maximum extent feasible, while achieving overall project goals and necessary fire prevention goals, and any deviations shall be clearly explained and identified in the PSA.

   Response:

   (a) The project would enhance habitat function in the treatment area that was burned in the 2020 CZU Lightning Complex by removing dead and dying vegetation, removing invasive vegetation, treating successional vegetation to restore ecosystem processes and natural fire regimes, which would promote long-term storage of carbon.

   Treatments within forest habitat types are anticipated to result in a healthy and diverse understory because the thinning of smaller understory trees would let additional sunlight reach the forest floor. In addition, forest density that exceeded 600 stems per acre before the 2020 CZU Lightning Complex will now be reduced to approximately 200 stems per acre of mid-range and larger diameter trees. This would facilitate the growth of remaining trees to achieve greater heights, trunk diameter, and crown expansion. The resulting forest would be more vigorous and able to resist vegetation pattern transformations that can occur in a changing climate, with reduced continuity of hazardous ladder fuels (i.e., smaller trees) to the canopy.

   The coastal scrub community mapped within the treatment area before the area exhibited a 100 percent loss of cover during the 2020 CZU Lightning Complex, and the vegetation community cannot be determined to the alliance level. Therefore, treatments that occur within chaparral and coastal scrub dominated habitats will only occur following assessment of the naturally re-generating vegetation alliances, and determination of the natural fire return interval, or

disturbance regime, of the alliances present. Treatments will only occur within the natural fire return interval if it is determined, with substantial evidence, that habitat function would be improved. Furthermore, treatments will be designed to avoid conversion to another vegetation alliance and will not result in complete removal of the mature shrub layer; and if the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity per project specific refinements to SPR BIO-5. In addition, project specific refinements to SPR BIO-5 require that habitat function be maintained, and would result in an appropriate percent cover of shrubs specific to the vegetation alliances that are determined to be present in the treatment area once post-fire regeneration has progressed to the point that alliances can be assessed.

These measures related to existing shrub cover will also be applied to the portion of the treatment area where the pre-fire knobcone pine stand suffered 100 percent pine mortality to reflect that a transitional chaparral community may be dominant as natural post-fire regrowth occurs. Over time, knobcone pine is expected to establish and overtop the manzanita shrub layer progressing to knobcone pine forest and woodland alliance. Natural progression from seral-stage chaparral to knobcone pine forest is not considered type conversion.

In addition, SPRs and mitigation measures are identified in the PSA that would protect the ecosystem. Measures include the following:

- Biological and botanical surveys will occur prior to treatment and avoidance and minimization measures will be implemented for identified resources, such as:
    - Special-status plant surveys will be conducted to identify special-status plants within the treatment area. If any are identified in the treatment area, a no-disturbance buffer will be implemented prior to treatment.
    - Bird nesting surveys will be conducted prior to treatments that would occur between February 1 and August 31 and impacts to any identified nest would be avoided through the establishment of buffers.
    - Special-status salamander surveys will be carried out prior to treatments at any time of year, and individual animals relocated by a qualified RPF or biologist with a valid CDFW scientific collecting permit.
    - Pallid bat surveys will occur prior to treatments that occur from April 1 to August 31, a no-disturbance buffer of 250 feet would be established around active pallid bat roosts, and mechanical and manual treatments using mechanical tools would not occur within this buffer.
    - Ringtail den surveys prior to operations that occur from April 15 – June 30 will be conducted, and no-disturbance buffers would be established around any identified active dens.
    - San Francisco dusky-footed woodrat nest surveys will be conducted, and nest relocation would occur if nests are identified.
- No mechanized treatments will occur during the wet season, beginning with the first frontal rain system depositing a minimum of 0.25 inch of rain after October 15, and ending on April 15.

- No mechanized treatments will occur within 24 hours of a precipitation event of 0.20 inch or greater.
- Mechanized operations will only occur on slopes less than 50 percent; however, if mechancial treatment is required on slopes greater than 50 percent, equipment that can reach from an existing road or trail would be used.
- Areas with substantial soil disturbance following treatment will be stabilized using vegetative debris, such as masticated vegetation or chips.
- Erosion control measures will be implemented and inspected, and monitoring for erosion will occur after the first large storm of the season following mechanical treatment.
- Waterbreaks will be used to drain stormwater on compacted soils and bare treatment areas.
- No heavy equipment operations within a Watercourse and Lake Protection Zone (WLPZ) will occur, or within 30 feet of a Class III watercourse (other than to travel over an existing crossing).
- Invasive species, such as French broom, will be controlled using the least invasive techniques possible, prioritizing handwork and using herbicides when needed. Herbicides would only by applied through targeted, hand-held devices and no aerial spraying would occur. All herbicide use would be subject to the California red-legged frog injunction, and would follow the requirements of SPRs HAZ-5, 6, 7, 8, 9, as well as SPR HYD-5. Together, these SPRs would avoid and minimize adverse effects to sensitive ecological resources by requiring buffers around special-status plants and water features, prohibiting application when weather parameters exceed label specifications or when sustained wind at the site of application exceeds 7 miles per hour, prohibiting application during or immediately prior to precipitation events, complying with all herbicide application regulations, and preparing and implementing a Spill Prevention and Response Plan.
- Specific measures will be implemented to reduce the spread of forest pathogens such as sudden oak death, including cleaning vehicles and hand tools prior to use.
- Pre-operational training with the contractors will be conducted to advise them of key resource issues, SPRs, and mitigation measures.
- For all treatment types in chaparral and coastal sage scrub, the project proponent, in consultation with a qualified RPF or qualified biologist will develop a treatment design that avoids type conversion of chaparral and coastal sage scrub vegetation alliances that naturally regenerate in the treatment area and maintains a minimum percent shrub cover to maintain habitat function of these types. Maintenance treatments will be designed adaptively, in response to conditions on the ground as vegetation recovers from the 2020 CZU Lightning Complex and following implementation of initial treatments to facilitate a positive post-fire recovery trajectory toward the desired condition, which is to approximate the species composition and vegetative structure of vegetation alliances that were present prior to historic logging practices and decades of fire suppression.

Additional requirements in chaparral and coastal sage scrub would be implemented, per the project specific refinements to SPR BIO-5.

Please see the PSA for additional details on applicable SPRs and mitigation measures.

(b) (c) The PSA for the project analyzes the potential impacts of the project on vegetation, wildfire, and maintenance of sensitive natural communities within the membership rules of the MCV. As discussed under item #6 (a) above, treatments in forested habitats would avoid type conversion, maintain habitat function, and result in a healthier forest that is able to resist vegetation pattern transformations under a changing climate while reducing the continuity of hazardous ladder fuels to the canopy. In non-forest habitat types (e.g., coastal scrub and chaparral) type conversion would be avoided, and habitat function maintained per SPR BIO-5, which requires minimum shrub retention percentages and other measures.

Other than the redwood stands left intact by the fire, the species composition and percent canopy cover of the sensitive habitats and sensitive natural communities that are known to occur or may have occurred in the treatment area prior to the 2020 CZU Lightning Complex have been substantially or catastrophically altered by the fire. Furthermore, it is not known if some of these communities will re-establish naturally for many years (e.g., San Andreas oak woodland, Shreve oak forest) due to the potential loss of seedbank, few surviving mature trees to disperse seeds, and relatively slow growth rates of these woody species. However, it is possible that occurrences of these species and communities would re-establish naturally. Overall, the project would facilitate restoration of vegetation communities present before the 2020 CZU Lightning Complex in the treatment area by replicating ecosystem processes that produce characteristic species composition, growth form, and vegetation structure of the sensitive natural communities and habitat types that existed prior to historic logging practices and decades of fire suppression.

(d) The project would provide for a mosaic of appropriate native plants by age, size, and class that support the overall habitat within the treatment area by following a specific treatment prescription, including:

- Retain native live vegetation greater or equal to 12 inches dbh;
- retain logs greater than 12 inches with preference for retaining the largest logs and those with cavities, for an average approximately 10 tons per acre;
- retain snags greater than 12 inches dbh at an average density of 1 to 2 per acre. Preference will be given to retaining the largest trees and trees with cavities, that are not hazard trees;
- retain all riparian species (e.g., elderberry); and
- In forested habitats, retain native understory shrubs with 25-50 feet of space between crowns, where shrub crown is approximately 10-15 feet wide. Spacing may be closer than 25 feet on level ground as needed to maintain the defined membership rules of existing vegetation alliances, and greater than 50 feet on steeper ground to mitigate wildfire behavior or near structures for structure protection.

Vegetation Removal Hierarchy. Except for prescribed fire project components, a vegetation removal hierarchy shall be identified and implemented for each project to obtain the vegetation cover threshold identified by a Registered Professional Forester or qualified professional, as necessary, while ensuring that unintended habitat conversion does not occur, and that vegetation cover is sufficient to support the project's ecological goals. In order of priority and application, the hierarchy shall be as follows: (1) thinning and removal of dead, dying, and irreversibly diseased foliage, shrubs (except that some snags should be retained to provide wildlife shelter, dens, etc.); (2) removal of invasive species; and (3) removal of native species that are not listed as endangered, threatened, rare, or otherwise especially valuable, with the end goal of having appropriate species composition in the plant community with a mix of vegetation age, height and density. In all cases, indicator species and diagnostic species appropriate to the vegetation alliance shall be maintained in accordance with the standards (membership rules) set forth by the second edition of the Manual of California Vegetation (MCV2), with the intention of maintaining cover and composition consistent with meeting project ecological goals. For Fire Prevention projects, additional vegetation removal may be allowed if maintaining such vegetation consistent with project ecological goals would result in an unacceptable fire risk to existing structures and infrastructure, and the removal is the minimum necessary to protect existing structures and infrastructure. Any such additional removal shall be clearly explained and identified in the PSA. Lastly, if vegetation cover threshold goals, as articulated in the MCV2, cannot be met, then removal of endangered, threatened, rare or otherwise especially valuable species and habitats shall be prohibited unless: such removal is critical to reduce the area's fire risk; removal is accompanied by restoration or enhancement such that the overall project provides net benefits to the habitat; and no other alternative exists that meets the project goals.

Response: The project would follow the vegetation removal hierarchy described in the Coastal VTS for projects in the Coastal Zone of Santa Cruz County and would not result in unintended habitat type conversion at the alliance level (i.e., would not result in conversion to another vegetation alliance). The removal of endangered, threatened, rare or otherwise especially valuable species and habitats would be avoided as discussed in item #6 above. Initial treatments would remove dead, dying, and irreversibly diseased vegetation and invasive plant species, while retaining live native trees greater than or equal to 12 inches dbh. Maintenance treatments would be conducted through the implementation of mechanical and manual treatments to remove hazard trees, understory vegetation, and ladder fuels, reduce the reestablishment of invasive species, and would follow the same SPRs and mitigation measures as discussed in item #6. These initial and maintenance treatments would increase and maintain the growth and vigor of any remaining live trees of all native species. In addition, the treatments would reduce fuel loads to protect the regeneration of native vegetation and restore habitat conditions including, habitat quality and natural fire processes, while protecting existing structures and infrastructure.

Limit Equipment Types. All projects shall be carried out using the least invasive type of equipment feasible. Projects shall avoid the use of large masticators, track vehicles, and other heavy equipment, where feasible. When such heavy equipment is used, it shall remain on existing roads to the extent feasible. In riparian habitat, the use of heavy equipment shall be prohibited, except when authorized through a valid Stream and Lakebed Alteration Agreement and/or, if applicable, Clean Water Act 401 Certification, and when reviewed and approved by CCC. Projects shall adhere to CalVTP SPR GEO-2 limiting heavy equipment use and SPR HYD-4 prohibiting heavy equipment use in WLPZ except on existing roads.

Response: The large volume of dead and dying vegetation within the treatment area makes avoiding the use of heavy equipment during treatment infeasible. The project would use manual and mechanical treatment activities, as well as herbicide application during initial and maintenance treatments. Heavy mechanical equipment would only be used when necessary to achieve project objectives and would remain on existing roads to the extent feasible. The project would implement SPR GEO-2, GEO-7 and HYD-4, as well as several other SPRs, to reduce impacts from heavy equipment use, such as limiting heavy equipment use on steep slopes to minimize erosion. No riparian vegetation has been identified in the treatment area and no riparian habitat would be treated by the project.

Limit Herbicide Use. Herbicides shall be avoided to the maximum extent feasible and may be used only if such treatment activities are the least environmentally damaging feasible alternative and will not result in significant adverse impacts to sensitive ecological resources (e.g., when used to control of invasive species). Projects shall adhere to CalVTP SPRs HAZ-5, 6, 7, 8, and 9.

Response: Herbicides would be used during initial and maintenance treatments to control invasive plant species when manual removal methods are not a viable or effective option. Herbicides would only by applied through targeted, hand-held devices and no aerial spraying would occur. All herbicide use would be subject to the California red-legged frog injunction, and would follow the requirements of SPRs HAZ-5, 6, 7, 8, and 9, as well as SPR HYD-5. Together, these SPRs would avoid and minimize adverse effects to sensitive ecological resources through requiring buffers around special-status plants and water features, prohibiting application when weather parameters exceed label specifications or when sustained wind at the site of application exceeds 7 miles per hour, prohibiting application during or immediately prior to precipitation events, complying with all herbicide application regulations, and preparing and implementing a Spill Prevention and Response Plan.

Prescribed Herbivory Use. Prescribed herbivory may be allowed if it is found to be the least environmentally damaging feasible alternative to achieving project goals. Prescribed herbivory shall be conducted pursuant to an approved plan that ensures protection of habitat and other coastal resources, as documented in the PSA.

Response: Prescribed herbivory would not occur under the proposed project.

Control Invasive Species. Treatment activities and treatment types shall limit the spread of invasive species and prevent the spread of plant pathogens in all habitats, including those habitats that are not determined to be sensitive natural communities, riparian habitats, or oak woodlands subject to CalVTP SPRs BIO-4 and 9.

Response: The project would implement SPR BIO-6 and BIO-9 for all treatment activities in all vegetation types, to limit the spread of invasive species, including French broom and plant pathogens, such as sudden oak death and pitch canker. Invasive species in the treatment area would be controlled via manual methods (e.g., hand pulling) and targeted use of herbicides via hand-held devices. SPR-BIO-4 provides protections for riparian habitats, and would not apply to this project, because no riparian habitat has been identified in the treatment area. SPR BIO-6 requires implementation of best management practices to prevent the spread of plant pathogens and SPR BIO-9 requires implementation of measures to prevent spread of invasive plants and noxious weeds.

Limit Fencing. The use of wildlife-friendly fencing for prescribed herbivory activities subject to CalVTP SPR BIO-11 shall require adequate ground clearance for smaller species to avoid entrapment and/or entanglement.

Response: Prescribed herbivory is not proposed as part of the project and no associated fencing would be used.

Accelerants. Accelerants shall only be allowed for use in prescribed fire applications. The use of accelerants that could significantly disrupt or degrade ESHA is prohibited.

Response: No accelerants are proposed for use as a part of this project.

Soil Stabilization. The use of riprap and/or chemical soil stabilizers that could significantly disrupt or degrade ESHA is prohibited.

Response: No riprap or chemical soil stabilizers are proposed for use as part of the project.

Protect Coastal Public Access and Recreation. Forest Health projects and Fire Prevention projects shall ensure that coastal public access and recreational opportunities are preserved during project operations to the maximum extent feasible, including by, but not limited to, minimizing trail closures, limiting the use of public parking spaces for staging operations, posting accessway signage and using flaggers, and designing construction access corridors in a manner that has the least impact on coastal public access. Following the completion of Forest Health projects and Fire Prevention projects, all impacted coastal public access and recreational amenities shall be restored to existing conditions, in a manner that maximizes coastal public access and recreation.

Response: The project occurs within Skylark Ranch, which is a private property owned by the Girl Scouts of Northern California and not located adjacent to the coast nor does it provide public access to the coast. Therefore, the project would have no impact on coastal public access or public recreation.