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W16a

SMC-NOID-0007-25 and VTP-NOID-0008-25

(Coastal Santa Cruz Mountains: State Parks Forest Health Initiative)

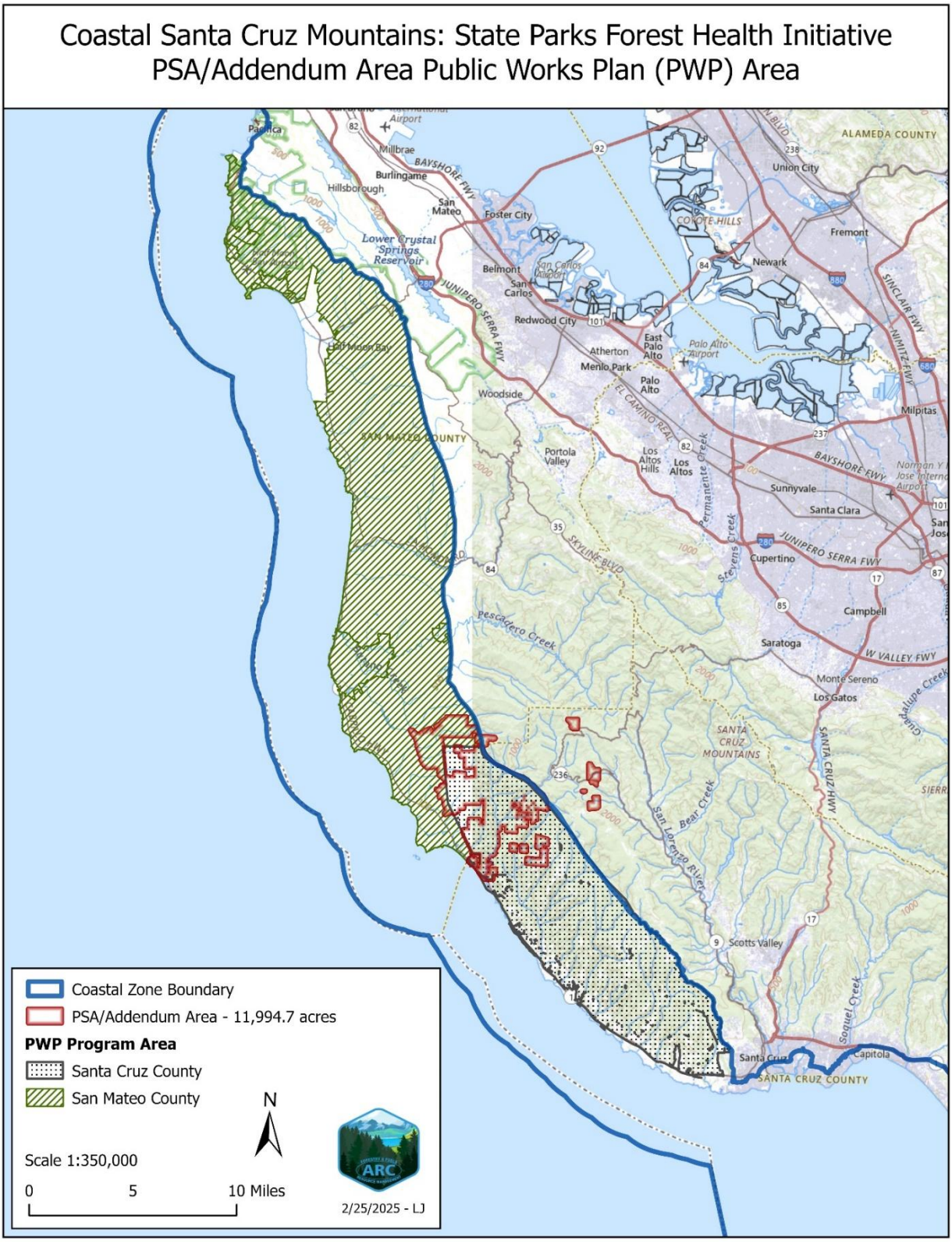
FEBRUARY 4, 2026

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Exhibit 1:
Regional Project Vicinity Map



SAN MATEO RESOURCE CONSERVATION DISTRICT

Exhibit 2: San Mateo County RCD Notice of Impending Development

PHONE: 650.712.7765
80 STONE PINE ROAD, SUITE 100
HALF MOON BAY, CA 94019
SANMATEORCD.ORG

Memorandum

Date: December 11, 2025
To: California Coastal Commission and Interested Parties
From: Kellyx Nelson, Executive Director, San Mateo Resource Conservation District
Timothy Federal, Senior Program Manager, San Mateo Resource Conservation District
Subject: **Notice of Impending Development for the Coastal Santa Cruz Mountains, State Parks Forest Health Initiative (SMC-NOID-0007-25)**

Pursuant to Public Resource Code Section 30606 and California Coastal Commission Regulations Section 13358 and Section 13359, this letter is presented to provide Notice of Impending Development (NOID) for the Coastal Santa Cruz Mountains: State Parks Forest Health Initiative project in San Mateo and Santa Cruz Counties. Such notice must be submitted to the Commission before a public agency proposing a public works project pursuant to a certified Public Works Plan (PWP) may commence the project.

Project Description

In the Fall of 2020, the CZU Lightning Complex fires (CZU Fire) burned 86,509 acres throughout Santa Cruz and San Mateo counties. This wildfire exhibited extreme fire behavior, fueled by dense vegetation and decades of accumulated forest debris. The fire burned through nearly the entirety of Big Basin Redwoods State Parks (BBRSP), portions of Año Nuevo State Parks (ANSP) and Butano State Parks (BSP), and much of the surrounding landscape. Its impact was catastrophic, affecting ecosystems, destroying homes and infrastructure, and tragically claiming one life. Prior to 2020, decades of fire suppression and recent droughts had led to heavy surface fuel buildup, creating conditions for a high-severity fire. These factors contributed to rapid fire spread, prolonged smoke impacts, and extensive damage to critical habitats and human communities.

Today, the aftermath of the CZU Fire presents ongoing challenges. Areas that burned at lower intensities now contain dense dead and dying understory vegetation, while higher-intensity burned areas hold large numbers of fire-killed trees. Without proactive management, these degraded conditions could accelerate shifts in vegetation types and further threaten forest health.

California State Parks and its partners are committed to protecting both natural resources and neighboring communities, and in order to do so must actively manage forested lands that remain vulnerable even after the 2020 fires. By reintroducing appropriate disturbances, such as removal of dead and dying trees, mastication of ladder fuels, prescribed fire and other vegetation management, this project aims to build more diverse, resilient forests and reduce the threat of catastrophic wildfire.

In 2023, CA State Parks, in collaboration with Save the Redwoods League, San Mateo RCD (SMRCD), and RCD of Santa Cruz County (RCDSCC), developed a Forest Management Strategy (FMS) to guide long-term forest restoration efforts throughout BBRSP, ANSP, and BSP. Subsequently, CEQA was completed for treatments proposed in the FMS by completing a Project-Specific Analysis (PSA) and Addendum to the California Vegetation Treatment Program (CalVTP), a statewide Programmatic Environmental Impact Report (PEIR) analyzing vegetation management

methods and their impacts. Included in the PSA for this project are the Coastal Vegetation Treatment Standards (CVTS) for Coastal Act compliance. This proposed project, the Coastal Santa Cruz Mountains: State Parks Forest Health Initiative, consists of vegetation treatments on up to approximately 11,995 acres of land managed by the Santa Cruz District of CA State Parks (CSP), Save the Redwoods League (STRL), and the Sempervirens Fund (SVF).

The mission of the California Department of Parks and Recreation is "To provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation." This project will accomplish that by implementing ecologically restorative treatments using methods including manual and mechanical vegetation management, prescribed burning, and targeted herbicide application. Treatments will restore ecological processes by reintroducing periodic, low-intensity disturbance to prevent the overgrowth of understory vegetation and ladder fuels and promoting a mosaic of vegetation types, reducing the density and continuity of dead, dying, and overly dense vegetation, and improving habitat for rare, threatened, and endangered plant and animal species. The result will be forested areas that are healthier, more diverse, more resilient to threats such as wildfire, drought, pathogens, and pests, and able to store more carbon for longer periods of time to help combat climate change.

Treatments may occur on up to 11,994.7 acres, of which 8,876 acres lie within the Coastal Zone in Santa Cruz County, and 2,569.6 acres lie within the Coastal Zone of San Mateo County. There are 550.1 acres analyzed in the PSA outside the Coastal Zone. Within San Mateo County, (SMC) prescribed broadcast burning is proposed for approximately 395.1 acres, and prescribed pile burning is proposed to be allowed across approximately 2,569.6 acres of the project area. Pile burning is used as a means of biomass disposal following manual thinning of vegetation and prescribed broadcast burning will occur seasonally as weather windows and resources become available, with the hopes of reintroducing low intensity fire in areas where it can safely occur. Mechanical treatments are proposed for approximately 627.4 acres in SMC and will occur primarily on flat to moderate slopes less than 40% and no greater than 50%. Machinery may be used to remove dense stands of understory vegetation and ladder fuels to maintain a healthy overstory and prepare an area for a prescribed burn. Manual treatments are proposed for up to 2,569.6 acres in SMC. These treatments use hand tools and hand-operated power tools, are generally not limited by slopes and can be implemented in locations otherwise not accessible for mechanical treatment. Like mechanical treatments, manual treatments will remove dense stands of understory vegetation and ladder fuels to maintain a healthy component of existing vegetation. Mechanical and Manual methods may be used in preparation for prescribed burning by reducing ladder fuels, and to create control lines around proposed burn blots to allow for safe use of beneficial fire. Herbicide would be used to prevent the spread and regrowth of invasive species within the treatment areas and is expected to occur on less than 2 acres total in the SMC project area. All treatments will be implemented as described in the PSA, except that treatment in chaparral or coastal sage scrub through this NOID may only occur if one of the following applies: (a) ecological restoration treatments consisting of removal of flammable, non-native vegetation; or (b) treatments where the stand of chaparral or coastal sage scrub has a state rarity rank of S4 (apparently secure) or S5 (demonstrably secure) according to CDFW (https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#listsExternal Link), and has generated following a fire within the last 15 years in an area previously characterized by woodland or forest before the fire, as evidenced by satellite imagery and as defined in accordance with the Key to Main Vegetation Categories in the CNPS *Manual of California Vegetation*. CSP will provide annual updates on the project website

(https://reimaginingbigbasin.org/forest-stewardship/) of treatments implemented in the past year including the treatment type, acres treated, a map of where treatment has occurred, and will highlight upcoming treatments.

Environmental Documents

The SMRCD's San Mateo County Forest Health and Fire Resilience Public Works Plan, and the RCDSCC's Santa Cruz County Forest Health and Fire Resilience Public Works Plan (PWPs), have both been certified by the Commission. The PWPs require adherence to the Coastal Vegetation Treatment Standards within each PWP and additional information about project design within the Santa Cruz and San Mateo County Coastal Zones. The PWPs also provide a streamlined mechanism for Coastal Act compliance in combination with the CEQA compliance process facilitated by the CalVTP Program Environmental Impact Report.

The CalVTP PEIR 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 and their impacts are included in the CalVTP PEIR, and Standard Project Requirements and (SPRs) and mitigation measures from the CalVTP PEIR will be integrated into the project to avoid and minimize impacts. The CalVTP PEIR provides a streamlined mechanism for CEQA compliance for vegetation treatment projects.

A PSA was prepared that evaluates this project as a later activity covered by the CalVTP PEIR as required pursuant to CEQA and includes information that demonstrates consistency with the CVTS as required pursuant to the Coastal Act and PWP. Direct response to the CVTS for the project can be found in Attachment E of the PSA.

Consistent with CEQA Section 21166 and CEQA Guidelines Sections 15162, 15163,15164, and 15168, an Addendum to an EIR is appropriate when the previously certified EIR has been prepared and changes or revisions to the project are proposed, or the circumstances surrounding the project have changed. This is valid as long as these changes or revisions would not result in any new or substantially more severe significant environmental impacts than were covered in the PEIR. This PSA proposes the inclusion of areas outside of the CalVTP treatable landscape, which constitutes a proposed change or revision to the project, compared to the originally certified PEIR. Each impact analysis in the PSA/Addendum includes additional specific justification for inclusion of areas outside of the treatable landscape, which supports an Addendum to the CalVTP PEIR. The impact analysis within the PSA/Addendum evaluates whether including an addition of geographic area, would result in significant impacts that would be substantially more severe than those covered in the CalVTP PEIR, or would result in any new impacts that were not analyzed in the PEIR. For this project, analyses have indicated that the inclusion of areas outside of the originally determined treatable landscape will not result in any new or more severe impacts than those analyzed in the CalVTP PEIR.

This NOID, as well as all supporting environmental documents, including the PSA and the CVTS are available for public review at the Coastal Commission office located at 455 Market Street, Suite 300, San Francisco, California 94105, beginning December 11, 2025, and continuing through the Commission's hearing for this matter at its meeting February 4-6, 2026. At least 10 days prior to the Coastal Commission's February 4-6 meeting, the documents will also be available for review and

download online on the California Coastal Commission's Agenda webpage, found under Meetings, Monthly agenda: https://www.coastal.ca.gov/. Additionally, the QR code below links to a webpage with links to all of the relevant documents and websites discussed in this NOID.

Consistency with PWP

The final San Mateo County Forest Health and Fire Resilience PWP was approved by the RCD's Board of Directors on June 17, 2021 (Notice of Forest Health and Fuel Reduction Public Works Plan | San Mateo RCD). The PWP was certified by the California Coastal Commission on July 8, 2021. The project will be carried out pursuant to the PWPs as documented in the PSA/Addendum and CVTS.

Approval Process

For the purposes of CEQA, CA State Parks is the project proponent and acting as the lead agency for the preparation of the PSA/Addendum. The San Mateo Resource Conservation District and the California Coastal Commission (CCC) are all responsible for reviewing the PSA and response to the CVTS and the CCC is solely responsible for 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. The PWP clearly articulates the process for all entities to review, determine consistency, and approve the project. SMRCD's role solely pertains to the project areas within San Mateo County. Submittal of this NOID constitutes SMRCD's approval of the project to be included in SMRCD's PWP.

The RCD staff contact for this project is:

Timothy Federal, Senior Program Manager
San Mateo Resource Conservation District
timothy@sanmateoRCD.org
650-712-7765 x.125

Consistent with the requirements of the PWP, the RCDs notified the Commission in advance of its intent to submit a NOID for the project. After receiving the NOID, the Commission has five working days to deem the NOID complete and filed or request additional information. The Commission is also responsible for reviewing the PSA and response to the CVTS and determining whether the project is consistent with the PWP. Commission review of a proposed project is deemed complete on the date that the project is determined to be consistent with the PWP. The proposed Commission hearing to approve the PSA/Addendum and act on the NOID will occur:

FEBRUARY 4 - 6, 2026
Oceano Hotel & Spa
280 Capistrano Rd.
Half Moon Bay, CA 94019

The specific date that this item will be considered by the Commission can be found by viewing the Coastal Commission's Agenda webpage, found under Meetings, Monthly agenda: https://www.coastal.ca.gov/. The Coastal Commission staff contact for this project is:

Claire Villegas, Coastal Planner
California Coastal Commission
455 Market Street, Suite 300
San Francisco, CA 94105
Claire.Villegas@coastal.ca.gov

Figure 1: Scan QR Code for list of links relevant to this notice

Exhibit 3:
RCD of Santa Cruz County Notice of Impending Development

Resource Conservation District
of Santa Cruz County
820 Bay Avenue, #136
Capitola, CA 95010
831.464.2950

Memorandum

Date: December 11, 2025
To: California Coastal Commission and Interested Parties
From: Lisa Lurie, Executive Director, Resource Conservation District of Santa Cruz County
Matt Abernathy, Forest Health and Wildfire Resiliency Program Manager, Resource Conservation District Santa Cruz County
Subject: **Notice of Impending Development for the Coastal Santa Cruz Mountains, State Parks Forest Health Initiative (VTP-NOID-0008-25)**

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Today, the aftermath of the CZU Fire presents ongoing challenges. Areas that burned at lower intensities now contain dense dead and dying understory vegetation, while higher-intensity burned areas hold large numbers of fire-killed trees. Without proactive management, these degraded conditions could accelerate shifts in vegetation types and further threaten forest health.

California State Parks and its partners are committed to protecting both natural resources and neighboring communities, and in order to do so must actively manage forested lands that remain vulnerable even after the 2020 fires. By reintroducing appropriate disturbances, such as removal of dead and dying trees, mastication of ladder fuels, prescribed fire and other vegetation management, this project aims to build more diverse, resilient forests and reduce the threat of catastrophic wildfire.

In 2023, CA State Parks, in collaboration with Save the Redwoods League, San Mateo RCD (SMRCD), and RCD of Santa Cruz County (RCDSCC), developed a Forest Management Strategy (FMS) to guide long-term forest restoration efforts throughout BBRSP, ANSP, and BSP. Subsequently, CEQA was completed for treatments proposed in the FMS by completing a Project-Specific Analysis (PSA) and Addendum to the California Vegetation Treatment Program (CalVTP), a

statewide Programmatic Environmental Impact Report (PEIR) analyzing vegetation management methods and their impacts. Included in the PSA for this project are the Coastal Vegetation Treatment Standards (CVTS) for Coastal Act compliance. This proposed project, the Coastal Santa Cruz Mountains: State Parks Forest Health Initiative, consists of vegetation treatments on up to approximately 11,995 acres of land managed by the Santa Cruz District of CA State Parks (CSP), Save the Redwoods League (STRL), and the Sempervirens Fund (SVF).

The mission of the California Department of Parks and Recreation is "To provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation." This project will accomplish that by implementing ecologically restorative treatments using methods including manual and mechanical vegetation management, prescribed burning, and targeted herbicide application. Treatments will restore ecological processes by reintroducing periodic, low-intensity disturbance to prevent the overgrowth of understory vegetation and ladder fuels and promoting a mosaic of vegetation types, reducing the density and continuity of dead, dying, and overly dense vegetation, and improving habitat for rare, threatened, and endangered plant and animal species. The result will be forested areas that are healthier, more diverse, more resilient to threats such as wildfire, drought, pathogens, and pests, and able to store more carbon for longer periods of time to help combat climate change.

Treatments may occur on up to 11,994.7 acres, of which 8,876 acres lie within the Coastal Zone in Santa Cruz County, and 2,569.6 acres lie within the Coastal Zone of San Mateo County. There are 550.1 acres analyzed in the PSA outside the Coastal Zone. Within Santa Cruz County, (SCC) prescribed broadcast burning is proposed for approximately 2,952.8 acres, and prescribed pile burning is proposed to be allowed across approximately 8,876.3 acres of the project area. Pile burning is used as a means of biomass disposal following manual thinning of vegetation and prescribed broadcast burning will occur seasonally as weather windows and resources become available, with the hopes of reintroducing low intensity fire in areas where it can safely occur. Mechanical treatments are proposed for approximately 1,390 acres in SCC and will occur primarily on flat to moderate slopes less than 40% and no greater than 50%. Machinery may be used to remove dense stands of understory vegetation and ladder fuels to maintain a healthy overstory and prepare an area for a prescribed burn. Manual treatments are proposed for up to 8,876.3 acres in SCC. These treatments use hand tools and hand-operated power tools, are generally not limited by slopes and can be implemented in locations otherwise not accessible for mechanical treatment. Like mechanical treatments, manual treatments will remove dense stands of understory vegetation and ladder fuels to maintain a healthy component of existing vegetation. Mechanical and Manual methods may be used in preparation for prescribed burning by reducing ladder fuels, and to create control lines around proposed burn blots to allow for safe use of beneficial fire. Herbicide would be used to prevent the spread and regrowth of invasive species within the treatment areas and is expected to occur on less than 9 acres total in the SCC project area. All treatments will be implemented as described in the PSA, except that treatment in chaparral or coastal sage scrub through this NOID may only occur if one of the following applies: (a) ecological restoration treatments consisting of removal of flammable, non-native vegetation; or (b) treatments where the stand of chaparral or coastal sage scrub has a state rarity rank of S4 (apparently secure) or S5 (demonstrably secure) according to CDFW (https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#listsExternal Link), and has generated following a fire within the last 15 years in an area previously characterized by woodland or forest before the fire, as evidenced by satellite imagery and as defined in accordance with the Key to Main Vegetation Categories in the CNPS

Manual of California Vegetation. CSP will provide annual updates on the project website (https://reimaginingbigbasin.org/forest-stewardship/) of treatments implemented in the past year including the treatment type, acres treated, a map of where treatment has occurred, and will highlight upcoming treatments.

Environmental Documents

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A PSA was prepared that evaluates this project as a later activity covered by the CalVTP PEIR as required pursuant to CEQA and includes information that demonstrates consistency with the CVTS as required pursuant to the Coastal Act and PWP. Direct response to the CVTS for the project can be found in Attachment E of the PSA.

Consistent with CEQA Section 21166 and CEQA Guidelines Sections 15162, 15163,15164, and 15168, an Addendum to an EIR is appropriate when the previously certified EIR has been prepared and changes or revisions to the project are proposed, or the circumstances surrounding the project have changed. This is valid as long as these changes or revisions would not result in any new or substantially more severe significant environmental impacts than were covered in the PEIR. This PSA proposes the inclusion of areas outside of the CalVTP treatable landscape, which constitutes a proposed change or revision to the project, compared to the originally certified PEIR. Each impact analysis in the PSA/Addendum includes additional specific justification for inclusion of areas outside of the treatable landscape, which supports an Addendum to the CalVTP PEIR. The impact analysis within the PSA/Addendum evaluates whether including an addition of geographic area, would result in significant impacts that would be substantially more severe than those covered in the CalVTP PEIR, or would result in any new impacts that were not analyzed in the PEIR. For this project, analyses have indicated that the inclusion of areas outside of the originally determined treatable landscape will not result in any new or more severe impacts than those analyzed in the CalVTP PEIR.

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Coastal Commission's February 4-6 meeting, the documents will also be available for review and download online on the California Coastal Commission's Agenda webpage, found under Meetings, Monthly agenda: https://www.coastal.ca.gov/.

Consistency with PWP

The final Santa Cruz County Forest Health and Fire Resilience PWP was approved by the RCD's Board of Directors on June 9, 2021 (https://www.rcdsantacruz.org/pwp). The PWP was certified by the California Coastal Commission on July 8, 2021. The project will be carried out pursuant to the PWPs as documented in the PSA/Addendum and CVTS.

Approval Process

For the purposes of CEQA, CA State Parks is the project proponent and acting as the lead agency for the preparation of the PSA/Addendum. The Resource Conservation District of Santa Cruz County and the California Coastal Commission (CCC) are all responsible for reviewing the PSA and response to the CVTS and the CCC is solely responsible for 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. The PWP clearly articulates the process for all entities to review, determine consistency, and approve the project. RCDSCC's role solely pertains to the project areas within Santa Cruz County. The RCDSCC's Board of Directors approved this project at a Board meeting that occurred on November 12, 2025.

The RCD staff contact for this project is:

Matt Abernathy, Forest Health and Wildfire Resiliency Program Manager
Resource Conservation District of Santa Cruz County
pwp@rcdsantacruz.org
831-464-2950

Consistent with the requirements of the PWP, the RCDs notified the Commission in advance of its intent to submit a NOID for the project. After receiving the NOID, the Commission has five working days to deem the NOID complete and filed or request additional information. The Commission is also responsible for reviewing the PSA and response to the CVTS and determining whether the project is consistent with the PWP. Commission review of a proposed project is deemed complete on the date that the project is determined to be consistent with the PWP. The proposed Commission hearing to approve the PSA/Addendum and act on the NOID will occur:

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The specific date that this item will be considered by the Commission can be found by viewing the Coastal Commission's Agenda webpage, found under Meetings, Monthly agenda: https://www.coastal.ca.gov/. The Coastal Commission staff contact for this project is:

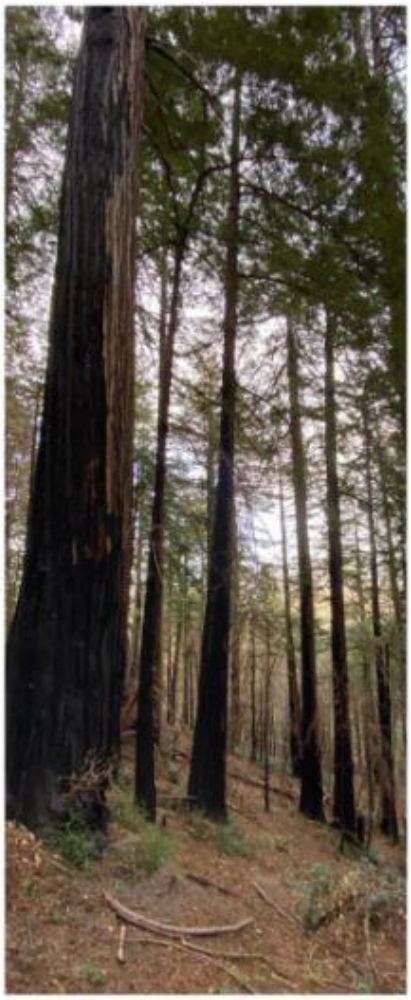
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Exhibit 4:
Project Specific Analysis and Addendum

Project-Specific Analysis and Addendum to the CalVTP PEIR

Coastal Santa Cruz Mountains: State Parks Forest Health Initiative





Prepared for:
California State Parks
Santa Cruz District

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California State Parks - Santa Cruz District

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Melisa Cambron Perez, mperez@sempervirens.org

David Cowman, Registered Professional Forester #3236, dcowman@sempervirens.org

In Collaboration with

San Mateo Resource Conservation District

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Resource Conservation District Santa Cruz County

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Auten Resource Consulting

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Prepared by:

Hudson Northrop (California State Parks)

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Timothy Federal (San Mateo Resource Conservation District)

Matt Abernathy (Resource Conservation District Santa Cruz County)

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List of Abbreviations and Acronyms

ANSP	Año Nuevo State Park
ARU	Audio Recording Unit
ASR	Archaeological Survey Report
AV	Audio-Visual (Surveys)
BAAQMD	Bay Area Air Quality Management District
BBRSP	Big Basin Redwoods State Park
BSP	Butano State Park
BIOS	Biogeographic Information and Observation System
CAAQS	California Ambient Air Quality Standards
CCC	California Coastal Commission
CalVTP	California Vegetation Treatment Program
CARB	California Air Resources Board
CCR	California Codes and Regulations
CA State Parks	California Department of Parks and Recreation
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CVTS	Coastal Vegetation Treatment Standards
CE	Candidate Endangered
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CT	Candidate Threatened
CWHR	California Wildlife Habitat Relationship
CZU Fire	August 2020 CZU Lightning Complex Fire
DBH	Diameter at Breast Height
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
ELZ	Equipment Limitation Zone
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
ESHA	Environmentally Sensitive Habitat Areas
ESU	Evolutionarily significant unit
FP	Fully Protected
FRAP	Fire and Resource Assessment Program
GIS	Geographic Information Systems
HCP	Habitat Conservation Plan
IAP	Incident Action Plan
LCP	Local Coastal Program
LRA	Local Resource Area
LTS	Less Than Significant
LTSM	Less Than Significant After Mitigation
MBARD	Monterey Bay Air Resources District
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission

NCCP	Natural Community Conservation Plan
NOA	Naturally Occurring Asbestos
NOX	Nitrous Oxide
NOID	Notice of Impending Development
NWIC	Northwest Information Center
PAD	Planned Agricultural Districts
PCA	Pest Control Advisor
PE	Proposed Endangered
PEIR	Program Environmental Impact Report
PRC	Public Resource Code
PWP	Public Works Plan
PSA	Project Specific Analysis
PSU	Potentially Significant and Unavoidable
PT	Proposed Threatened
R	Rare
RCD	Resource Conservation District
RCDSCC	Resource Conservation District of Santa Cruz County
RM	Resource Management District
ROG	Reactive Organic Gases
RPF	Registered Professional Forester
STRL	Save the Redwoods League
SVF	Sempervirens Fund
SB	State Bill
SCCC	Santa Cruz County Code
SFGS	San Francisco garter snake
SMRCD	San Mateo Resource Conservation District
SENL	Single Event Noise Levels
SOD	Sudden Oak Death
SPR	Standard Project Requirement
SPRP	Spill Prevention and Response Plan
SRA	State Responsibility Area
SSC	Species of Special Concern
SU	Significant and Unavoidable
T	Threatened
TAC	Toxic Air Contaminants
TMP	Traffic Management Plan
TPZ	Timber Production Zone
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VMT	Vehicles Miles Traveled
WDR	Waste Discharge Requirements
WL	Watch List
WLPZ	Watercourse and Lake Protection Zone
WUI	Wildland-Urban Interface

1.0 Introduction to Project-Specific Analysis

The ecosystems of the Santa Cruz Mountains have undergone dramatic changes over the past centuries due to shifts in land management regimes and changing climatic conditions. Santa Cruz mountain ecosystems evolved under the influence of numerous natural disturbances, such as wildfire, drought, winter storm events, and other phenomena. This array of disturbance regimes, in combination with the application of prescribed fire and other stewardship techniques used by indigenous groups in the area, resulted in an incredibly biodiverse and resilient landscape that hosted a suite of vegetation types and wildlife species (Greenlee and Langenheim, 1990). However, much of the diversity and ecological function of these ecosystems are now at risk due to shifts in land management and changing climatic conditions. The implementation of fire suppression in the early 1900s had largely removed fires from the ecosystem prior to 2020, endangering fire dependent plant species and associated wildlife species, while also allowing for increased densities of understory vegetation and accumulation of fuel loads (Cowman and Russell, 2020; Kranich and Auten, 2024). These changes result in forest systems with lower biodiversity, less drought resilience due to competition, and continuous fuel beds that are conducive to high severity wildfire. Overall, this has shifted the fire regime of the Santa Cruz Mountains from one containing relatively frequent, lower severity fires, toward a regime containing more infrequent, but higher severity wildfires. Concurrently, as anthropogenic-driven climate changes shift towards warmer and drier conditions these ecosystems are at further risk of high severity wildfire events and vegetation shifts due to changing climate conditions (EcoAdapt 2021).

In the Fall of 2020, the CZU Lightning Complex fires (CZU Fire) burned 86,509 acres throughout Santa Cruz and San Mateo counties, exhibiting extreme fire behavior and burning significant amounts of dense vegetation within both coastal counties. The fire burned through nearly the entirety of Big Basin Redwoods State Parks (BBRSP), portions of Año Nuevo (ANSP) and Butano State Parks (BSP), and much of the surrounding landscape. Like much of the Santa Cruz Mountains, many of these areas were outside of their pre-European contact fire return intervals, with dense vegetation and elevated fuel loads. Due to lack of fire at an appropriate interval, many of these areas had accumulated high surface fuel loads that resulted in a continuous fuel bed conducive to a high severity fire. The result from the CZU Fire was that areas that burned at lower intensities now contain high densities of dead and dying understory vegetation. In addition, areas that burned at higher intensities contain high densities of fire-killed trees and resprouting vegetation (Kranich et al., 2024). This results in ecosystem conditions with elevated fuel loads and fuel connectivity which collectively create an increased likelihood of high severity fire that could accelerate vegetation type change, especially if expected changes in climate increase the frequency of high severity wildfire.

The California Department of Parks and Recreation (CA State Parks) works with a multitude of collaborators and partners throughout the Santa Cruz Mountains and stays well connected with many other large landowners often through the Santa Cruz Mountains Stewardship Network[1]. CA State Parks and its partners view the CZU Fire as an opportunity to reintroduce ecologically appropriate disturbances, such as fire and fire surrogates, to the Santa Cruz Mountains to create a more diverse and resilient ecosystem. CA State Parks, in collaboration with its partners, developed a Forest Management Strategy to guide long-term forest restoration efforts throughout BBRSP, ANSP, and BSP, and have subsequently developed this Project-Specific Analysis (PSA) and Addendum to provide California Environmental Quality Act (CEQA) compliance and the Coastal Vegetation Treatment Standards (CVTS) for Coastal Act

[1] The Santa Cruz Mountains Stewardship Network (https://www.scmsn.net) website provides additional information regarding its mission statement and the organizations involved.

compliance coverage for applicable management actions described in the Forest Management Strategy. This proposed project, the Coastal Santa Cruz Mountains: State Parks Forest Health Initiative, consists of vegetation treatments on up to approximately 11,994.7 acres of land managed by the Santa Cruz District of CA State Parks, Save the Redwoods League (STRL), and the Sempervirens Fund (SVF). Due to steep slopes and limited access throughout much of the project area, initial treatments will likely focus on accessible and operable ground throughout the properties. Treatments and maintenance treatments will later expand to other portions of the parks and adjacent properties included in the PSA/Addendum area.

The mission of the California Department of Parks and Recreation is "To provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation." For the purposes of this project, this will be accomplished by implementing ecologically restorative treatments using treatment activities such as prescribed burning, manual and mechanical treatments and targeted herbicide application (Map 6). Treatments will restore ecological processes by promoting a mosaic of vegetation types, reducing the density and continuity of dead, dying, and overly dense vegetation, and improving habitat for rare, threatened, and endangered plant and animal species where possible.

1.2 CEQA and Coastal Act Compliance

The California Vegetation Treatment Program (CalVTP) is a statewide program by which public agencies perform vegetation treatment activities for the purposes of promoting ecological restoration and fuel reduction efforts on private and public land. The CalVTP Programmatic Environmental Impact Report (PEIR) provides a powerful tool to enable expedited environmental review for projects that both follow the CalVTP treatment guidelines and implement an array of carefully crafted avoidance, minimization, and mitigation actions to ensure that implementation does not result in significant impacts to natural resources. The PEIR was certified in 2019 as a document compliant with the CEQA. This PEIR offers an array of permittable vegetation treatments that allow for ecological restoration, forest health treatments, and other vegetation treatments aimed at reducing the risk of wildfire and increasing ecological resilience. Compliance with the PEIR requires preparation and submittal of a PSA. The PSA/Addendum must demonstrate how the project will comply with Standard Project Requirements (SPRs) and Mitigation Measures from the PEIR.

The project area is located in the Coastal Zone and is split by two counties and two Public Works Plans (PWP) that provide a programmatic mechanism for Coastal Act compliance acting as companion documents to PSA's developed under the CalVTP. These county PWP's are referred to as the San Mateo County Forest Health and Fire Resilience PWP and the Santa Cruz County Forest Health and Fire Resilience PWP (Map 1). Of the 11,994.7 acres included in this PSA, 8876 acres lie within the Coastal Zone in the Santa Cruz PWP, 2569 acres lie in the Coastal Zone in the San Mateo PWP, and 550 acres lie outside of the Coastal Zone.

Each PWP includes Coastal Vegetation Treatment Standards (CVTS), which provide additional details and design standards for projects within the County's Coastal Zone. This PSA/Addendum has been designed to address both the requirements of the CalVTP PEIR as well as each PWP, including the CVTS. Responses to the CVTS for this project can be found in Attachment D.

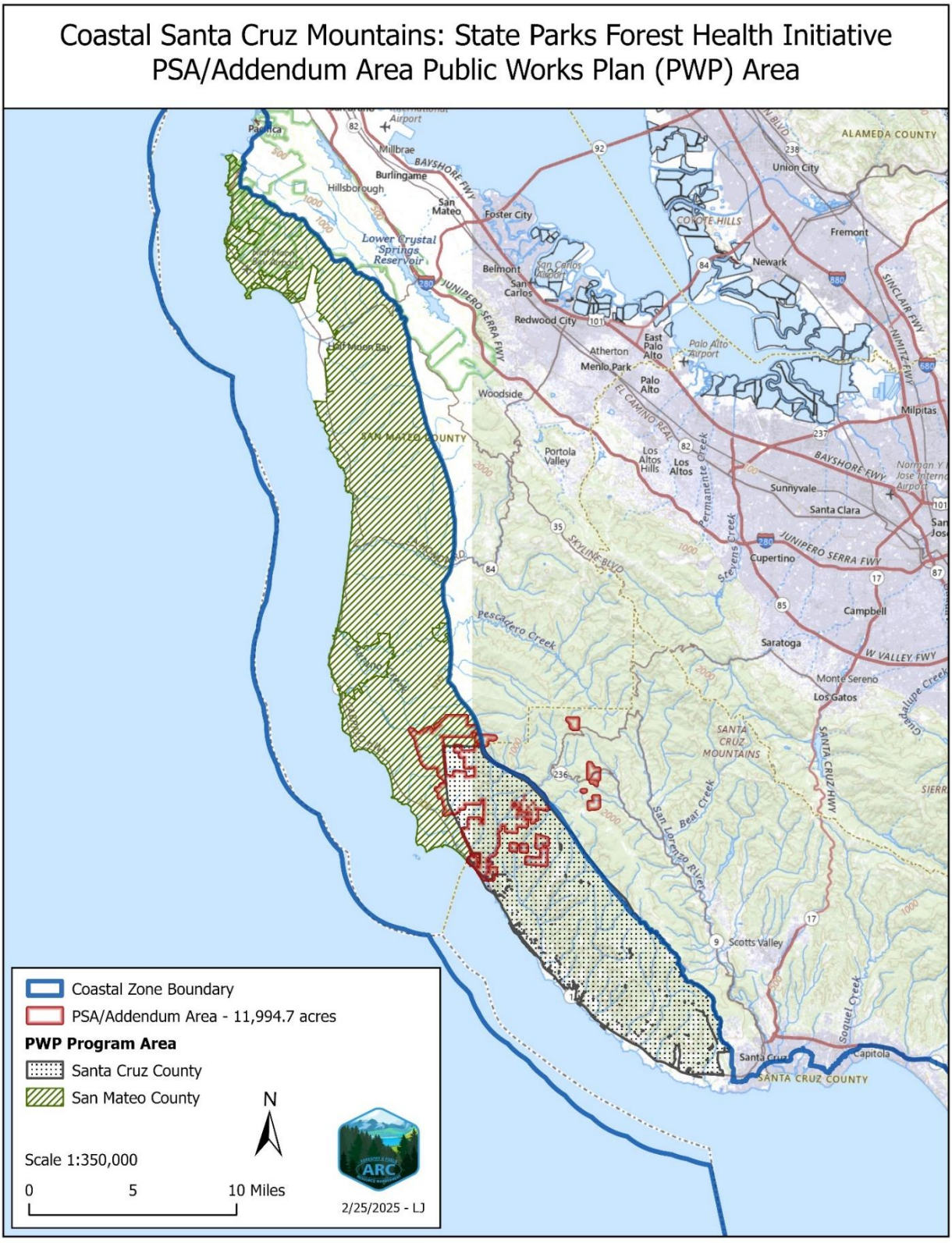
1.2.1 Purpose of PSA/Addendum

This document serves as a PSA and Addendum to evaluate the site-specific conditions within the coastal portion of BBRSP, BSP, ANSP, and adjacent properties owned by STRL and SVF and determine whether proposed project treatments are within the scope of the California Vegetation Treatment Program Programmatic Environmental Impact Report. As a CEQA document, this PSA/Addendum does not expire unless conditions substantially change within the project area; this PSA/Addendum may be amended to

include evaluation of the new conditions or in some cases, depending on the significance of the changed conditions, a memorandum, an amendment, or minor clarification may also be prepared.

The PSA/Addendum is intended to expedite CEQA review and analysis of the proposed vegetation treatments within the project area. The body of the PSA/Addendum provides site-specific environmental analysis that is supported by substantial evidence to determine that all proposed project treatments are consistent with the PEIR.

Additionally, this PSA/Addendum sets the bounds of management actions that may take place within the project area over time under this CEQA document.



Map 1. PSA/Addendum area, Coastal Zone Boundary, and Public Works Plans of San Mateo and Santa Cruz County

For the purposes of CEQA, CA State Parks is the project proponent and acting as the lead agency for the preparation of the PSA/Addendum. Under this PSA/Addendum, CA State Parks is the implementing entity and is responsible for carrying out all applicable SPRs and Mitigation Measures, unless noted otherwise in the Mitigation Monitoring and Reporting Program; where treatments occur on Save the Redwoods League or Sempervirens Fund properties, implementing, verifying, or monitoring efforts may be shared with respective landowners.

The San Mateo Resource Conservation District (SMRCD), and Resource Conservation District of Santa Cruz County (RCDSCC) are both responsible for reviewing the PSA/Addendum and responses to the CVTS. As specified in each PWP, the RCDs shall be responsible for drafting the PWP and any amendments, releasing them for public review, and approving them at the local level, as well as preparing all proposed Notice of Impending Development (NOID) (Project) components, including drafting Project-Specific Analyses, public noticing of NOIDs, submitting NOIDs to the Commission, and preparing and submitting any other Project materials to the Commission. The RCDs shall ensure that individual projects are developed in coordination with Coastal Commission and county staff and in compliance with the PWP and CalVTP PEIR. The RCDs shall also be responsible for monitoring and enforcement of Project conditions. The RCDs may partner with other agencies, landowners, and others to implement the responsibilities above but shall be responsible for implementation of the PWP and NOID processes. The RCDs shall also be responsible for monitoring and enforcement of Project conditions.

The California Coastal Commission (CCC) will be responsible for reviewing the PSA/Addendum and responses to the CVTS and determining that the project is consistent with each PWP. Each PWP clearly articulates the process for the CCC and RCDs to review, determine consistency, and approve the project for coverage under the PWP. To maintain compliance with PWP requirements, landowner agreements will be in place and shared with CCC staff prior to implementation of any treatments.

For projects planned to be included in the San Mateo PWP and for which SMRCD is not lead agency for the associated CEQA document, and projects in the Santa Cruz PWP for which RCDSCC is not lead agency for the associated CEQA document, each RCD's role is limited to oversight and assistance during project development to ensure that project design and associated monitoring and mitigation measures are consistent with the PWP and Coastal Vegetation Treatment Standards (CVTS). Submittal of a NOID shall constitute each RCD's concurrence that the documents being submitted to CCC were developed with each RCD's consultation and are consistent with the CVTS and each PWP. The responsibility for final determination of consistency of a submitted project with any individual PWP belongs solely to CCC. RCDSCC's role solely pertains to the project areas within Santa Cruz County, and SMRCD's role solely pertains to the project areas within San Mateo County.

The CalVTP was introduced in the Forest Management Strategy for BBRSP, BSP, and ANSP as an applicable CEQA compliant document that can be used to implement many of the ecologically restorative treatment prescriptions and forest management actions outlined in the Forest Management Strategy. Thus, this PSA/Addendum was developed in alignment with the State Parks Forest Management Strategy for BBRSP, BSP, and ANSP.

1.2.2 Collaborators and other efforts

CA State Parks has many ongoing efforts throughout the Santa Cruz District focused on achieving landscape-level resilience and ecological restoration. Within BBRSP, major collaborative efforts include Reimagining Big Basin, the Facilities Management Plan, and the completed Forest Management Strategy.

Reimagining Big Basin,[2] completed in 2022, is a collaborative vision developed and inspired by recovery efforts following the CZU Fire, to guide the reestablishment of BBRSP. Its mission is to collaboratively renew BBRSP, protect old growth forests, and steward the natural lands with respect to post-fire conditions following the devastating loss of infrastructure and forest resources as a result of the CZU Fire. The basis of Reimagining Big Basin's vision for stewardship is encapsulated in its vision statement: *"park stewardship, based on scientific and Indigenous knowledge, will foster forest health and create opportunities to connect visitors of all backgrounds and abilities with redwood forests for generations to come…"* (Vision Statement and Summary, n.d.).

The Big Basin Redwoods State Park Facilities Management Plan[3] was designed as part of the Reimagining Big Basin visioning process. The intent of the Facilities Management Plan is to plan for the re-establishment of facilities in an ecologically sensitive manner that supports visitor experiences within the park. The development of the Facilities Management Plan involves multiple stages of stakeholder engagement, alternative designs development and analysis, and ongoing environmental review, all of which lead to a final Facilities Management Plan in 2025.

The Forest Management Strategy, finalized in August 2024, functions as a guide and supporting document to implement forest management actions that restore a more resilient forest ecosystem in the face of modern anthropogenic and climatic influences and aids in the development of environmental documents and permits. As an evaluation of ecosystem conditions and strategic planning document for BBRSP, BSP, and ANSP, the Forest Management Strategy provides detailed regulatory requirements for different permitting strategies to aid in project planning, environmental documentation and analysis, implementation, and monitoring which was used to aid the development of this PSA/Addendum. The Forest Management Strategy identifies a multitude of restorative management actions to forward CA State Parks' visions. A subset of these actions identifies approximately 2,019 acres of prioritized treatments that serve as a foundation of restoration efforts that are intended to be built upon over time.

1.2.3 Proposed Project Revisions

The CalVTP PSA is a CEQA efficiency tool designed to include a project-specific implementation checklist for streamlining CEQA review of site-specific vegetation treatment projects consistent with the PEIR, in accordance with procedures described in State CEQA Guidelines Section 15168. An Addendum to the PEIR is another CEQA efficiency tool designed to address project components that are not within the scope of the PEIR, but result in only minor technical changes or additions, consistent with CEQA Section 21166 and CEQA Guidelines Sections 15162, 15163, 15164, and 15168. In this case, this PSA/Addendum considers the inclusion of areas outside of and adjacent to the CalVTP treatable landscape and revisions to CalVTP Standard Project Requirements (SPRs) that are not analyzed within the PEIR; these changes do not result in changed circumstances.

This PSA/Addendum comprises the joint implementation of these CEQA efficiency tools in a single document. To qualify for certification, this PSA/Addendum implements all applicable Standard Project Requirements (SPRs) and Mitigation Measures (MMs) and analyzes the site-specific treatments and resources to ensure that all potential impacts are within the scope of the PEIR, meaning that the findings within the PSA are consistent with the findings of the PEIR.

Under this project, the proposed treatment types and treatment activities are consistent with the PEIR. However, portions of the proposed project treatment areas extend outside of the CalVTP treatable

[2] The *Reimagining Big Basin Vision Summary* website provides additional information regarding the vision, strategies, outreach and educational events, etc.
[3] General information, planning objectives, and the *Basis of Design Document for the Facilities Management Plan* are available online for reference.

landscape. Furthermore, CA State Parks has deemed that certain requirements of 4 SPRs are operationally infeasible, would prevent CA State Parks from achieving project goals, or are not warranted to maintain the impact analyses conclusions in the PEIR due to site-specific circumstances.

The project proponent is proposing revisions to SPR CUL-4, SPR GEO-1, SPR HAZ-1, and SPR HYD-4; these are described below. Revisions to the treatable landscape and four SPRs constitute a change to the CalVTP PEIR's description of later project activities and analyzed treatment design and implementation. These proposed revisions would not result in any new or substantially more severe significant impacts on any of the resources evaluated in the PEIR and described in this PSA/Addendum. Evidence to explain this conclusion is presented under each applicable resource, as summarized below and presented throughout Section 3.

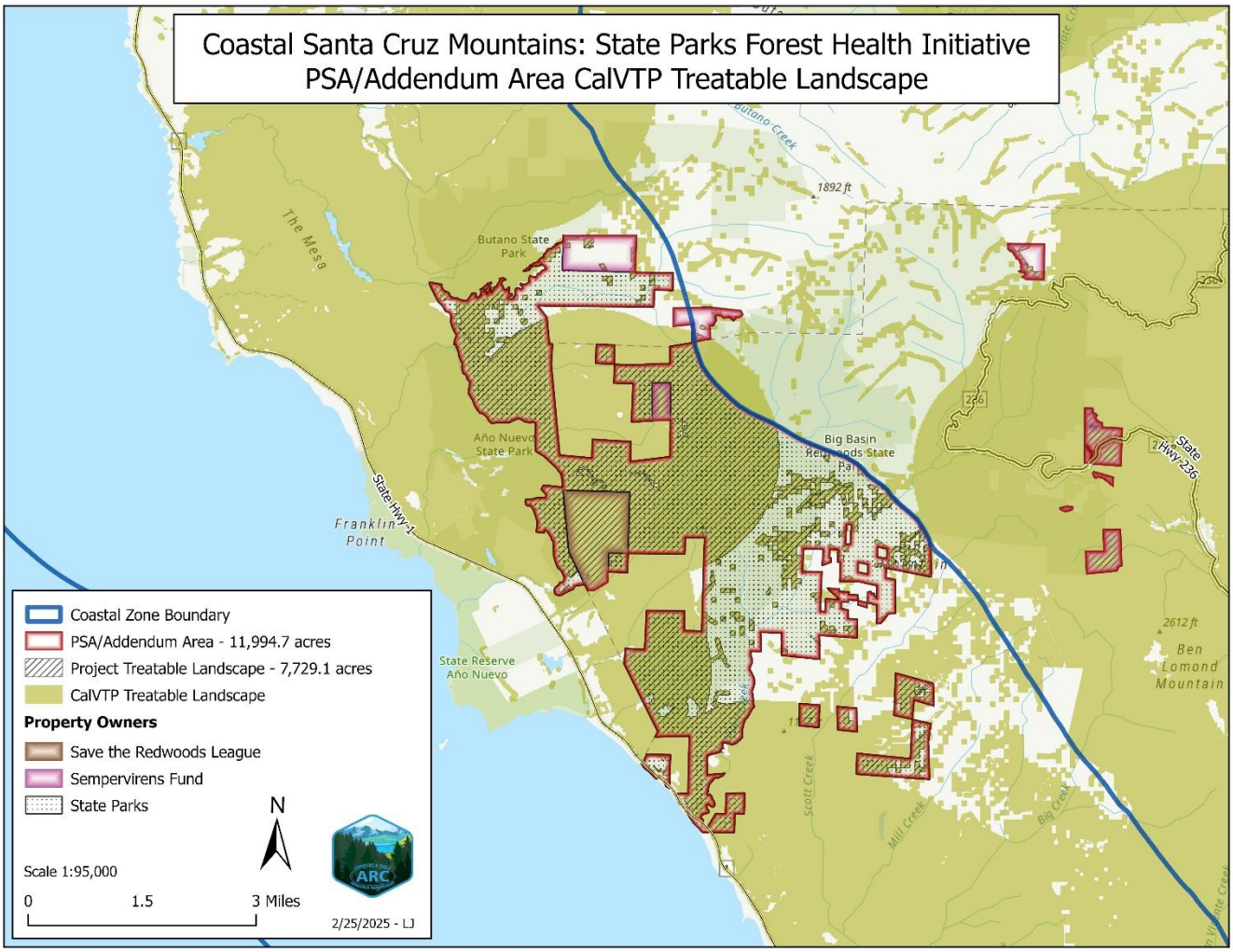
Treatable Landscape

Portions of the proposed project treatment areas extend outside of the CalVTP treatable landscape. In total, the area outside of the treatable landscape constitutes 4,265.6 acres of a total of 11,994.7 acres for the entire project area (Map 2, Table 1). The portions that are located outside of the treatable landscape include small sections directly adjacent to other portions of the project area that are dispersed in discontinuous patches. There are 3,029 acres within the Santa Cruz PWP that are outside of the treatable landscape, and 1,074 acres within the San Mateo PWP outside of the treatable landscape. Of the remaining 162 acres that are outside the treatable landscape, 80 are outside of the coastal zone and within Santa Cruz County, and 82 are outside of the coastal zone and within San Mateo County (Table 1).

As per the PEIR (CalVTP Final PEIR Volume II Appendix PD-1) the treatable landscapes were developed using three Geographic Information Systems (GIS)-based analyses that compared state responsibility area (SRA), applicable treatment types (WUI fuel reduction, fuel breaks, and ecological restoration), and vegetated landscapes dominated by tree, shrub, or grass plant communities. Because this methodology was coarsely applied to the entirety of California, it did not allow high mapping resolution and omitted locations that would otherwise have been included. The lack of mapping resolution for the treatable landscapes was accounted for in each PWP and the entirety of the proposed project area is included for coverage under that document (Map 1). Treating these areas will expand the connectivity of ecologically restorative treatments in vegetative and landscape conditions that are essentially the same or substantially similar to those within the treatable landscapes in the project area.

	Acreage Within CZ (SC PWP)	Acreage Within CZ (SM PWP)	Acreage Outside CZ (SC County)	Acreage Outside CZ (SM County)	Total Acreage
PSA/Addendum Area within Treatable Landscape	5,846.7	1,495.3	364.3	23.9	**7729.1**
PSA/Addendum Area outside treatable landscape	3,029.7	1,074.3	79.3	82.6	**4265.6**
				Overall Total	**11,994.7**

Table 1. PSA/Addendum Area Treatable Landscape Acreages Within Coastal Zone by PWP Program Area



Map 2. PSA/Addendum Area and CalVTP Treatable Landscape

SPR CUL-4

SPR CUL-4, as presented in the PEIR, requires that an archaeological survey report for all treatment activities and treatment types, including treatments that do not result in ground disturbance or other risk of impact to archaeological or historical resources (e.g., manual treatments and herbicide application).

CA State Parks proposes to conduct archaeological surveys only for ground disturbing treatment activities (i.e., treatments that include the use of heavy equipment) and prescribed burning treatment activities. The specific language of SPR CUL-4 is shown below, with CA State Parks' revisions shown in underline and/or strikethroughs.

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~~ mechanical and prescribed burning treatment

activities and manual treatment activities that utilize tracked chippers beyond established road surfaces under all treatment types, including treatment maintenance.

As described in the CalVTP PEIR Section 2.5.2., manual treatments and application of herbicide would deploy less distributive ground treatments and are effectively used in sensitive areas and habitats. Example activities may include burn pile construction by hand, carrying material to a chipper, lopping and scattering material, tree planting, and other manual handwork restoration activities. Thus, conducting an archaeological survey report for areas designated for manual treatments and herbicide applications would result in unnecessary loss of work time. This revision to SPR CUL-4 would help to prevent unnecessarily slowing down project implementation while maintaining the overall intent of SPR CUL-4 in areas where ground disturbance activities have a higher likelihood of affecting archaeological artifacts. CA State Parks can still elect to conduct archaeological surveys if they choose to based on the sensitivity of a given treatment area.

Potential impacts resulting from revisions to SPR CUL-4 are discussed below under Section 3.4, "Archaeological, Historical, and Tribal Cultural Resources." As explained in these sections, the proposed revisions to SPR CUL-4 would not result in any new or substantially more severe significant impacts than were analyzed in the PEIR. Impacts on other resources would not occur as a result of these revisions, because SPR CUL-4 is not required to reduce environmental effects on any other resources from implementation of the project. The proposed revisions to SPR CUL-4 are shown in underline and strikethrough in the MMRP (Attachment A).

SPR GEO-1

SPR GEO-1, as presented in the PEIR, requires suspension of certain treatment activities, including mechanical treatments and herbicide application during heavy precipitation (i.e., if the National Weather Service forecast is a chance [30 percent or more] of rain within the next 24 hours). As described in the CalVTP PEIR, mechanical treatments, herbivory, and herbicide application conducted during precipitation events can result in soil disturbance, erosion, increased runoff, soil destabilization, and water quality impacts.

CA State Parks proposes to suspend mechanical treatments (1) if it is raining, (2) soils are saturated, or (3) soils are wet enough to be compacted by mechanical treatment activities and to suspend herbicide application if the National Weather Service forecast is a "chance" (30 percent or more averaged over each hour) of rain within the next operational day's 12-hour period between 6:00 a.m. and 6:00 p.m.

The specific language of SPR GEO-1 is shown below, with CA State Parks' revisions shown in underline and/or strikethroughs.

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 and will suspend mechanical treatments when (1) it is raining, (2) soils are saturated and/or, (3) soils are wet enough to be compacted by mechanical activities. 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.

This project does not propose the use of prescribed herbivory. In the coastal region of the project area, forecasts often include a chance of rain; however, precipitation sometimes does not materialize. Therefore, suspension of mechanical treatment activities in these cases could result in unnecessary loss of work time. Without this revision to SPR GEO-1, the project objectives may not be achieved. Additionally, defining the 12-hour window that will be used to calculate the next day's average precipitation potential will ensure a consistent methodology for the implementing entity.

Potential impacts resulting from revisions to SPR GEO-1 are discussed below under Section 3.5, "Biological Resources," Section 3.6, "Geology, Soils, Paleontology, and Mineral Resources," and Section 3.10, "Hydrology and Water Quality." As explained in these sections, the proposed revisions to SPR GEO-1 would not result in any new or substantially more severe significant impacts than were analyzed in the PEIR. Impacts on other resources would not occur as a result of these revisions, because SPR GEO-1 is not required to reduce environmental effects on any other resources from implementation of the project. The proposed revisions to SPR GEO-1 are shown in underline and strikethrough in the MMRP (Attachment A).

SPR HAZ-1

SPR HAZ-1, as presented in the PEIR, requires that the project proponent inspect all equipment for leaks prior to the start of treatment activities and everyday thereafter until equipment is removed from the site, and any equipment found leaking be promptly removed from the treatment area.

CA State Parks proposes to promptly stabilize any equipment found leaking and fix it on-site or remove the leaking equipment from the treatment area, outside of the Watercourse and Lake Protection Zones (WLPZs).

The specific language of SPR HAZ-1 is shown below, with CA State Parks' revisions shown in underline and/or strikethrough.

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 stabilized and fixed onsite or removed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.

This revision gives the project proponent the flexibility to fix equipment on-site if feasible and continue treatment rather than requiring all leaking equipment be removed. This would help to prevent unnecessarily slowing down project implementation while maintaining the overall intent of SPR HAZ-1 to minimize hazardous material releases in treatment areas from equipment use.

Equipment is checked daily for leaks and is not staged within watercourse lake protection zones (WLPZ) or near sensitive resources. This revision allows leaking equipment to be staged immediately, and may be moved to a less sensitive area, rather than being required to demobilize and potentially risk spreading the leak through more ESHA or other sensitive resources. All other applicable SPRs will be following to minimize this impact.

Potential impacts resulting from revisions to SPR HAZ-1 are discussed below under Section 3.3 "Air Quality," Section 3.9 "Hazardous Materials," and Section 3.10 "Hydrology and Water Quality." As explained in these sections, the proposed revisions to SPR HAZ-1 would not result in any new or substantially more severe significant impacts than were analyzed in the PEIR. Impacts on other resources would not occur as a result of these revisions, because SPR HAZ-1 is not required to reduce environmental effects to any other resources from implementation of the project. The

proposed revisions to SPR HAZ-1 are shown in underline and strikethrough in the MMRP (Attachment A).

SPR HYD-4

SPR HYD-4, as presented in the PEIR, requires that the project proponent establish Watercourse and Lake Protection Zones (WLPZs) on either side of Class I, Class II, Class III, and Class IV watercourses, as defined by 14 CCR Section 916 .5 of the California Forest Practice Rules. CA State Parks proposes to establish the WLPZs for only the watercourses within 300 feet of the manual, mechanical, prescribed pile burning, and herbicide treatments.

The specific language of SPR HYD-4 is shown below, with CA State Parks' revisions shown in underline and/or strikethrough.

The project proponent will establish Watercourse and Lake Protection Zones (WLPZs) within 300 feet of mechanical, manual, herbicide application, and prescribed burning treatment or staging areas 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.

This revision would limit the amount of time spent by the project proponent identifying and delineating WLPZs, as well as limit the amount of high visible flagging used throughout the project area. This would help ensure that all WLPZs within a treatment area, or near a staging area, are recently flagged, without unnecessarily slowing down project implementation to establish all WLPZs throughout the entire park, while maintaining overall intent of SPR HYD-4 to prevent

degradation of watercourses during implementation of manual, mechanical, and prescribed pile burning. Existing roads utilized for ingress or egress to project areas would not constitute a "treatment or staging area" for the purposes of this revision.

Potential impacts resulting from revisions to SPR HYD-4 are discussed below under Section 3.5 "Biological Resources," Section 3.6 "Geology, Soils, Paleontology, and Mineral Resources," Section 3.9 "Hazardous Materials," and Section 3.10 "Hydrology and Water Quality." As explained in these sections, the proposed revisions to SPR HYD-4 would not result in any new or substantially more severe significant impacts than were analyzed in the PEIR. Impacts on other resources would not occur as a result of these revisions, because SPR HYD-4 is not required to reduce environmental effects to any other resources from implementation of the project. The proposed revisions to SPR HYD-4 are shown in underline and strikethrough in the MMRP (Attachment A).

1.3 Problem Statement

Vegetated ecosystems of the Santa Cruz Mountains, and the host of valuable services they provide, such as biodiversity, important wildlife habitat, old growth redwoods, and other natural resources, are currently at risk of loss due to a changing climate and the legacy of past land management in the region (EcoAdapt 2021).

Before the widespread policy of fire suppression in the Western United States in the early 1900s, estimates suggest that redwood ecosystems in the Santa Cruz Mountains burned approximately every 15-60 years (Stephens and Fry, 2005; Russell and Jones, 2015). Furthermore, because coastal redwood systems were not typically the focus of indigenous burning practices, it is expected that fire occurred even more frequently in coastal oak woodland, grasslands, and coastal prairies.

Prior to the CZU Fire, much of the areas in BSP, ANSP, and the coastal portion of BBRSP had not experienced fire or any analogous disturbance in over a century. As a result, many of the forested

ecosystems were overstocked with small and medium-sized trees that were able to germinate and persist under low-light conditions. The resulting forest structure was vulnerable to a stand-replacing wildfire due to elevated surface and ladder fuels from the smaller trees, as well as less resilient to drought and other disturbances due to the large number of trees per acre competing for available nutrients, sunlight, and water. Furthermore, in valuable habitat types, such as hardwood forests, shrub-dominated areas, and grasslands, the lack of frequent fire resulted in extensive conifer encroachment into these systems, where conifer trees, predominantly Douglas-fir, are able to overtop, shade out, and ultimately convert these systems into a more homogenous forest structure (Cocking, Varner, and Sheriff, 2012).

In 2020, the CZU Fire burned through 86,509 acres in the Santa Cruz Mountains, exhibiting extreme fire behavior and burning significant amount of vegetation within the Coastal Zone of both Santa Cruz and San Mateo counties. The high intensity fire in many shrub and forest stands resulted in significant mortality of the dominant vegetation, resulting in immediate habitat losses. Due to the release of dormant seedbanks and post-fire successional processes, many of these ecosystems are recovering and exhibiting different plant community compositions than were present pre-fire and may take decades to achieve comparable ecosystem services.

Furthermore, areas that experienced high severity fire throughout the park contain high densities of hardwood and Douglas-fir snags, including an intertwined thicket of resprouting *Ceaonthus spp.* in the understory (Kranich and Auten, 2024). As the understory *Ceanothus* begins to senesce and dead trees decay and fall, the resulting forest structure will have an increased continuity of significant fuel loading consisting of shrubs and dead woody material. The resulting conditions coupled with the increased potential for hotter and drier climatic conditions increase the likelihood of high severity fire that may accelerate vegetation changes (Coppoletta et al., 2016, Lydersen et al., 2019). Additionally, invasive plant species pose a continual threat capable of displacing native vegetation and reducing overall biodiversity and quality of habitat in these ecosystems especially where exposed to considerable increases in sunlight.

The resulting ecosystem conditions require environmentally sensitive landscape-level treatments to restore ecological conditions and maintain and protect environmentally sensitive habitat areas within the coastal Santa Cruz Mountains.

1.4 Goal Statement

The goal of the Coastal Santa Cruz Mountains: State Parks Forest Health Initiative is to ecologically restore forest and shrubland conditions to exhibit an increase in healthy growth of mature vegetation while allowing for natural regeneration of understory plant species.

Specific Goals within the project area include:

- Protecting sensitive natural communities and promoting the health of woodland, native grassland, and shrubland ecosystems by reducing conifer encroachment. To increase the health and vigor of residual stands and promote an increase in understory biodiversity.
- In forested ecosystems, establish an open, healthy, and diverse understory by creating forest gaps, removing dead, dying, diseased, and overly dense vegetation, and thinning of small diameter or codominant trees. This will result in a more open understory containing a mosaic of understory species, will retain important habitat features such as snags, large woody debris, and large overstory trees, while also creating appropriate spacing between shrubs and residual trees to increase wildfire resilience.
- Chaparral stands that experienced high severity wildfire will be allowed to reestablish naturally and within their appropriate fire return interval.
- Reintroduce prescribed fire at appropriate intervals to maintain vegetation types, recycle nutrients, reduce fuels, increase resilience, create complexity, and promote a mosaic of diverse plant communities and wildlife habitat.

These goals will be accomplished by implementing prescribed fire or fire surrogates, such as mechanical mastication, manual tree and vegetation removal, pile burning, and broadcast burning to appropriately address the needs of each vegetative community within the project area.

This project supports the goals of the San Mateo and Santa Cruz Resource Conservation Districts Forest Health and Fire Resilience Program PWPs by seeking to:

- Proactively restore forest health, improve ecosystem resiliency, and conserve working forests by conducting ecologically minded forest health treatments.
- Encourage the long-term storage of carbon of forest and woodland trees and soils through the reduction of dense understory, thus promoting larger healthier stands of mature trees.
- Promote a mosaic of native vegetation types that support diverse native floral, faunal, and fungal assemblages and are resilient to climate change.
- Improve habitat for rare, threatened, and endangered plant and animal species where they are present.
- Increase the ability to manage wildfire and implement prescribed fire.

This project also supports the goals of the California Coastal Commission (CCC) by:

- Promoting public safety, health, and welfare, and protecting public and private property, wildlife, and the natural environment, by protecting the ecological balance of the coastal zone and preventing its deterioration and destruction (California Coastal Act 30001 I).
- Protecting, maintaining, and, where feasible, enhancing and restoring the overall quality of the coastal zone environment and its natural and artificial resources (California Coastal Act 30001.5 (a)).
- Ensuring orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state (California Coastal Act, 30001.5 (b)).

1.5 Project Location and Site

The project area spans properties owned by CA State Parks, STRL, and SVF (Map 3, Map 4). This section describes the areas included within the PSA/Addendum by each respective landowner.

CA State Parks Properties - BBRSP, BSP, & ANSP

The BBRSP, BSP, and ANSP properties are located in the Santa Cruz Mountains between Butano Ridge, Ben Lomond Mountain, and the coast west of Highway 35, or Skyline Boulevard and approximately 45 miles south of the Golden Gate Bridge in San Francisco (Map 3). These three parks are located in proximity to each other and share similar natural and cultural resources. BSP and ANSP span approximately 4,540 acres and 4,329 acres respectively within San Mateo County, located to the northeast and east of BBRSP. BBRSP falls within the jurisdiction of both San Mateo County and Santa Cruz County, where it spans over approximately 18,000 acres in total. This PSA/Addendum applies to 8247 acres in BBRSP, 1214 acres in ANSP, and 1017 acres in BSP, all of which lie within the Coastal Zone (Table 2).

There already exists an approved PSA/Addendum in BSP, the Butano State Park Forest Health Project, which was approved in 2022. However, the project included a subset of the overall area of BSP due to limited funding for treatments at the time. This PSA/Addendum seeks to include 1,017 acres of BSP that were not initially included in the Butano State Park Forest Health Project. The treatments proposed for the 1,017 acres in BSP are in alignment with the treatments included in the Butano State Park Forest Health Project, but will adhere to this PSA/Addendum.

The project area within BBRSP is best accessed from Chalks Road off the coast via Highway 1 a few miles north of Davenport, California. The inland portion of BBRSP outside of the project area can also be

accessed from the east via Highway 9 and Highway 236 near Bouler Creek. Highway 1 also provides access to ANSP, which is located north of BBRSP's Highway 1 access, and to BSP via Pescadero Road and Cloverdale Road from the town of Pescadero to the north or via Gazos Creek Road and Cloverdale Road from the south from Highway 1.

BBRSP, BSP, and ANSP are state-managed recreation properties known for their old growth redwood forests and the biodiversity they encompass in the coastal mountains. The parks contain a myriad of recreational opportunities, such as hiking, biking, camping, and day-use facilities. Following the 2020 CZU Lightning Complex Fire that burned the majority of the parks, CA State Parks are actively re-opening and reconstructing trails and facilities for public use.

Save the Redwoods League Property – Cascade Creek

The Cascade Creek property, owned by the Save the Redwoods League, encompasses 564 acres and lies in Santa Cruz County. It shares a boundary with BBRSP to the east and north, and borders ANSP to the west. Similar to the eastern portion of BBRSP, this property is best accessed through Chalks Road. The current landowner objectives include protecting the property from development, protecting important habitat for threatened and endangered species, and furthering public recreation and education concerning natural resources.

Sempervirens Fund Properties – Cougar Ridge, Gazos 320, & Lachenbruch

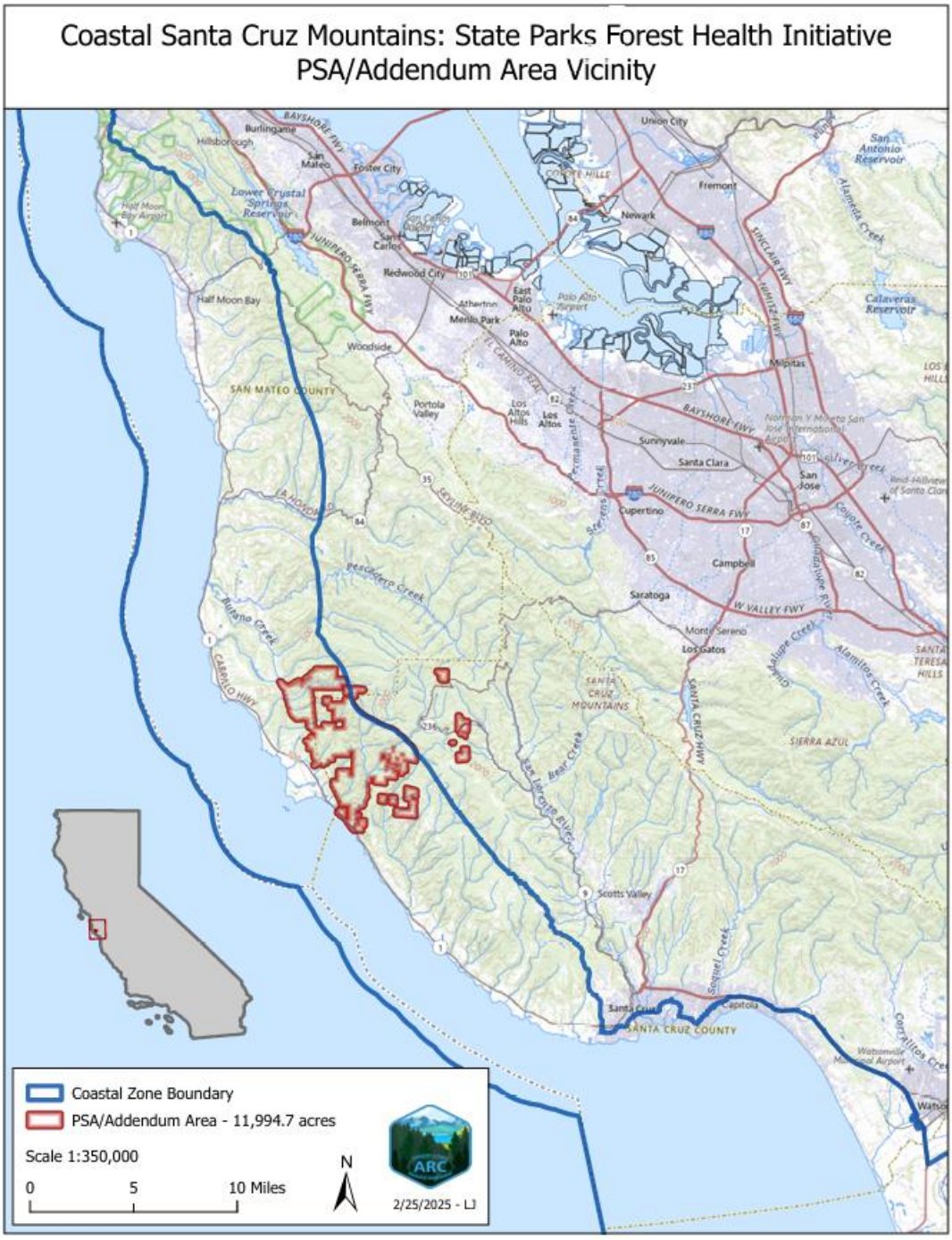
The Sempervirens Fund owned properties include the Cougar Ridge Road parcels, the Gazos 320 mountain parcel, and the Lachenbruch parcel. The Cougar Ridge parcels connect to the northern boundary of BBRSP in San Mateo County and encompass a total of 158 acres, consisting of three 40-acre parcels and one 38-acre parcel. These parcels are accessible via Gazos Creek Road. The Gazos 320 mountain parcel borders the southern boundary of BSP in San Mateo County and is 320 total acres. It is only accessible via Olmo Fire Road, a road that runs through BSP. The Lachenbruch parcels shares a boundary with BBRSP to the west, north, and east in San Mateo County and is 76 acres. It is accessible via Whitehouse Creek Road.

All of the Sempervirens Fund properties are being managed for natural resource protection and are not open to the public for recreation, with the eventual goal of conveying the properties to the State Parks system.

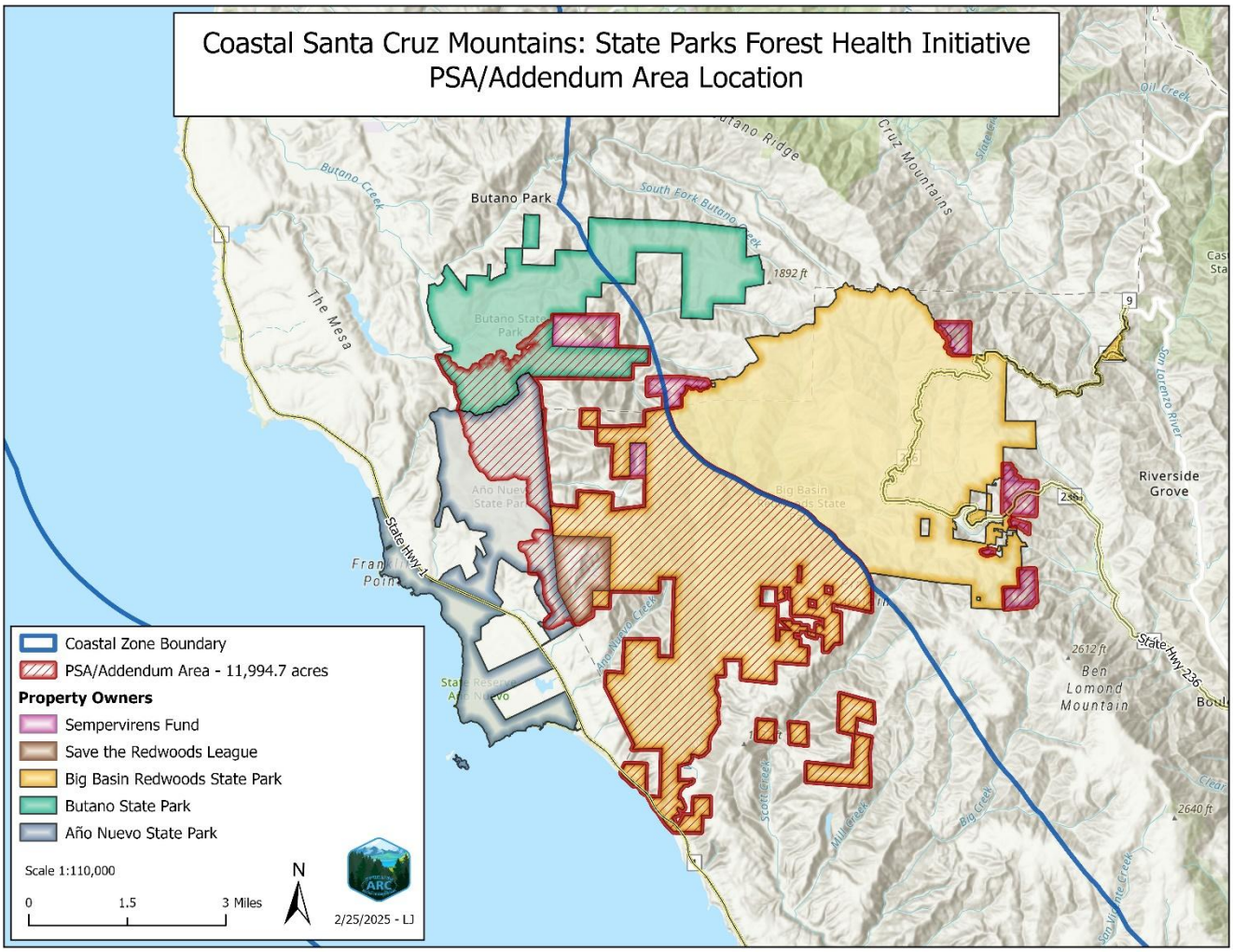
Adjacent lands are predominately privately owned and include a mix of residences and timberland owners. Other State Parks are located nearby, such as Castle Rock State Park and Portola Redwoods State Park.

Property	Acreage Within CZ (SC PWP)	Acreage Within CZ (SM PWP)	Acreage Outside CZ (SC County)	Acreage Outside CZ (SM county)	Total Acreage
BBRSP (CA State Parks)	8246.7	0	0	0	**8246.7**
ANSP (CA State Parks)	0	1214.9	0	0	**1214.9**
BSP (CA State Parks)	0	1017.6	0	0	**1017.6**
Cascade Creek (STRL)	551.3	0	0	0	**551.3**
Cougar Ridge (SVF)	0	41	0	106.5	**147.5**
Gazos 320 (SVF)	0	305.8	0	0	**305.8**
Lachenbruch (SVF)	82.4	0	0	0	**82.4**
Griffith (SVF)	0	0	6.9	0	**6.9**
Heyl (SVF)	0	0	3.3	0	**3.3**
Rose (SVF)	0	0	6.9	0	**6.9**
Jamison (SVF)	0	0	129.9	0	**129.9**
Minton (SVF)	0	0	114.5	0	**114.5**
Mortensen (SVF)	0	0	16.5	0	**16.5**
Norabella (SVF)	0	0	150.7	0	**150.7**
Potter (SVF)	0	0	15.1	0	**15.1**
				Total PSA acreage	**11,994.7 acres**

Table 2. PSA/Addendum Acreage by Landowner



Map 3. Vicinity Map of PSA/Addendum Project Area.



Map 4. Project Location Map of PSA/Addendum.

1.6 Ecosystem Conditions

The project area contains a variety of ecosystems, vegetative communities, and associated wildlife species. The forested areas consist predominantly of coniferous forests dominated by coastal redwood (*Sequoia sempervirens*) and Douglas-fir (*Pseudotsuga menziesii*) with components of several hardwood species including but not limited to tanoak (*Notholithocarpus densiflorus*), Pacific madrone (*Arbutus menziesii*), and various oak species (*Quercus spp.*). Knobcone pine (*Pinus attenuata*) is present along select ridgetops and slopes along the coast. The lower portion of the Waddell watershed contains riparian forest consisting of big leaf maple (*Acre macrophylum*), red alder (*Alnus rubra*), black cottonwood (*Populus trichocarpa*), and various willows species (*Salix spp.*).

As described in sections 1.1 (Introduction) and 1.3 (Problem Statement), the lack of frequent fire and other disturbances in the 1800's and 1900's throughout the area resulted in the expansion of fire sensitive species. This caused higher forest densities with continuous horizontal and vertical fuel loading and greater competition between individual trees, resulting in a more stressed and less resilient forest ecosystem. Similarly, the expansion of fire sensitive species, such as Douglas-fir, into sensitive habitats such as oak woodlands, grasslands, and shrublands resulted in the loss or degradation of those habitat types. While the 2020 CZU Fire killed many trees encroaching into those sensitive ecosystems and reduced much of the understory vegetation that accumulated due to lack of frequent fire, the post-fire conditions still exhibit unhealthy forest characteristics as the forests still contain a dense understory of

resprouting vegetation and high densities of dead and dying trees (Kranich et al., 2024). Additionally, the fire burned at mixed severity in some areas of the project so encroachment from surviving Douglas-fir trees and subsequent regeneration remains a threat to grasslands, shrublands, and hardwoods.

Many disturbance-dependent species have emerged following the CZU fire. This includes Anderson's manzanita (*Arctostaphylos andersonii*) a locally rare seed-dispersed manzanita species whose dormant seedbank was activated by the CZU fire. Similarly, the fire triggered the regeneration of numerous knobcone pine seedlings along ridgetops and coastal slopes. Unfortunately, the disturbance from the CZU fire has also caused the germination and spread of numerous invasive species throughout the project area, such as French broom (*Genista monspessulana*), jubata grass (*Cortaderia jubtata*), stinkwort (*Dittrichia graveolens*), and various non-native annual grasses.

2.0 Project Description

2.1 Project Specifications

General Treatment Specifications:

Broadly, the goal of our treatments is to maintain habitat function for wildlife, including special-status species and sensitive natural communities, and to re-establish inherent resilience of the ecosystem by encouraging natural processes and disturbance regimes. This will involve the reduction of understory forest and vegetation densities, reintroducing larger scale prescribed fire, and removal of Douglas-fir trees to restore woodland, grassland, and shrubland ecosystems at risk due to conifer encroachment, and promoting understory biodiversity. Additionally, our treatments will strategically retain trees of varying sizes, understory vegetation in a mosaic pattern, and large woody debris on the forest floor to accomplish our objectives. The outcomes of these treatments are representatively pictured below in Figure 1, referencing Strong and Bevis (2016) "Wildlife-Friendly Fuels Reduction in Dry Forests of the Pacific Northwest". We plan to accomplish this by applying mechanical, manual, prescribed burning, and targeted herbicide application treatments.



Figure 1. Adapted from Strong and Bevis (2016). Left, a forest from which fire has been removed for many years. Right, a forest treated to reduce fire risk, be more resilient to insects and disease, and enhance wildlife habitat. Components retained in the treated stand include snags, legacy trees, openings, and patches.

Our treatment activities will follow the following prescription guidelines:

- Removal of select live trees less than or equal (≤) to 16 inches diameter at breast height (dbh) to achieve crown and bole spacing with less vertical and horizontal fuel connectivity, promote the growth of residual trees, and promote habitat restoration;
    - may remove larger trees of any size to meet ecological restoration goals (e.g., removing trees that are hindering resilience by contributing to elevated ladder fuel and canopy connectivity, increasing competition amongst retention trees, or are otherwise inhibiting healthy habitat function for wildlife and sensitive natural communities, etc.);
    - retain healthy hardwoods and conifers with appropriate canopy spacing, except where Douglas-fir are converting grassland, shrubland, or hardwood forest habitat types through shading, in which case, Douglas-fir may be removed to restore ecosystem conditions
- retain existing standing habitat trees, consisting of standing dead, snags, or live trees with dead portions of stems or branches, to provide habitat for wildlife (e.g., birds and beneficial insects), and provide a food source for birds and other wildlife. Where snags do not present a safety hazard, approximately 4-6 foraging snags and 1-2 cavity nesting snags will be retained per acre;
- retain downed woody debris in strategic locations to maintain forest floor complexity, with a preference for larger, complex logs, totaling approximately 10 tons per acre, while reducing fuel connectivity;
    - target retention for downed woody debris may also be considered as four larger logs (large end greater than 16 inches dbh, approximately 15 feet long);
- prune lower branches of trees 6-15 feet but, not more than 33% of the tree's crown where feasible;
- retain micro-stands of untreated oak trees (i.e., young oak stands that do not have an established, dominant overstory) with a cluster radius of approximately 15-25 feet (30-50-foot diameter), where feasible, with consideration given to steepness or whether this retention could exacerbate fire behavior, or fire behavior proximal to key infrastructure and assets;
- retain micro-stands of oaks (i.e., young oak stands that do not have an established, dominant overstory) spaced approximately 75-100 feet apart, where feasible, with consideration given to steepness or whether this retention could exacerbate fire behavior, or fire behavior proximal to key infrastructure and assets;
- Retain micro-stands of understory vegetation cover and composition that are characteristic of the vegetation alliance as described in the Manual of California Vegetation (Sawyer et al., 2009) or current version, including updated natural communities' data at http://vegetation.cnps.org/). Leave root systems intact for resprouting to achieve a horizontal crown separation of approximately 25 to 75 feet between clusters depending on site-specific characteristics relative to the vegetation alliance being treated, important habitat values, and potential fire behavior. Overall, a minimum of 10 to 25 percent absolute cover per acre of understory vegetation would be retained while maintaining the existing vegetation alliance as described in the Manual of California Vegetation. The percentage retained would depend on if exacerbated fire behavior is expected in proximity to key infrastructure and assets. Patches or clumps of vegetation would be retained across the treatment area to create a mosaic pattern to provide heterogeneity and maintain habitat quality (Strong & Beavis, 2016)
- For appropriate chaparral and coastal sage scrub communities that are not sensitive natural communities, retain vegetation at a minimum of approximately 50 percent and a target of 65 percent in any chaparral-dominated area within the immediate contiguous stand boundary of the vegetation type within a treatment polygon in a mosaic pattern of patches or shrub islands to maintain a varied level of habitat continuity throughout the polygon, subject to retention standards

required pursuant to treatment type, CalVTP SPRs and mitigation measures. Additional considerations are required for sensitive natural communities.

- maintain root systems intact, where feasible, to allow for resprouting; mechanical treatments will target above-ground vegetation with the intent of keeping masticating heads out of duff layers and minimizing direct disturbance to subsurface soil layers, allowing intact root systems to resprout and minimizing impacts to burrowing wildlife;
- chipped biomass should generally average 3 inches in depth and not exceed approximately 6 inches;
- chipped residual material should be minimized in forest gaps or openings where increased biodiversity of herbaceous understory regeneration is more likely;
- mechanical treatments would not be conducted within wet meadows or WLPZs. Some vegetation may be removed by reaching an excavator arm into a wet meadow or WLPZ such that no ground disturbance would occur within wet meadows or WLPZs;
- equipment movement may operate on slopes approximately less than 50%;
    - where mechanized treatments will occur predominantly on slopes less than 40%
- may remove any dead, dying, and diseased trees and hazard trees of any size; and remove trees that are contributing to elevated ladder fuel and canopy fuel connectivity, increasing competition amongst retention trees, or are otherwise inhibiting healthy habitat function for wildlife and sensitive natural communities
- prepare burn units for prescribed fire (Map 6).

2.2 Project Justification

A significant amount of planning and effort by CA State Parks and its partners was devoted to conducting field investigations, including the installation of 264 Forest Trend Monitoring Plots and evaluating subwatershed conditions, in the footprint of the CZU Fire to develop a Forest Management Strategy that outlines treatments to implement in much of the PSA's extent. The implementation of treatments outlined in this PSA will improve forest health conditions at the landscape-level by building upon efforts recently implemented in the Santa Cruz Mountains. These projects include, but are not limited to, forest health projects implemented in Butano State Park, Camp Butano Creek, Huddart County Park (San Mateo County), Wunderlich County Park (San Mateo County), and Skylark Ranch. Additionally, there are various collaboratives within the Santa Cruz Mountain region, spanning Santa Cruz, San Mateo, and Santa Clara counties that continue to plan and implement ecologically restorative treatments where there is connectivity to other similar projects. It is essential to plan for ecologically restorative treatments within the coastal zone to continue to build upon the landscape-level connectivity and achieve greater ecosystem resilience in the face of changing climates. This project area has been identified as a high priority location for forest health and resilience treatments due to containing areas of significant forest health impairments and potential for restoration activities that improve habitat and ecosystem conditions.

Following the 2020 CZU Fire, many of these impairments have been further exacerbated by the high accumulation of dead and dying understory vegetation and trees now prevalent throughout the park. Furthermore, due to severe drought, lack of fire in the lower elevations of the project area, and past land-use history, many locations throughout the area contain forest, shrubland, and grassland ecosystems, which are vulnerable to changing climatic regimes and the subsequent variable forms of disturbance that follow, including catastrophic wildfire, drought, and pest and pathogen infestations. The results of these cumulative impacts are disproportionate amounts of dead and dying understory vegetation, dense even-aged stands of Douglas-firs in areas that were once coastal grasslands and shrublands, and the relatively

rapid loss of remaining, and heavily impaired, grasslands. The ecologically restorative treatments proposed for this project build upon the opportunity presented by the reintroduction of fire into the park (CZU Fire), as well as similar completed regional projects, by reintroducing targeted, ecosystem-driven forest health treatments with the goal of promoting a mosaic of vegetation types, increasing the health and development of large overstory trees and the species that rely on them, and ultimately promoting a landscape equipped to adapt and persist with a changing climate.

Prior to the CZU Fire, vegetation within much of the project area was too dense for land managers to safely implement prescribed fire and achieve target fire behavior. By temporarily reducing understory vegetative fuel loads throughout portions of the park, the CZU Fire has afforded CA State Parks with an unforeseen opportunity to reincorporate fire under prescribed settings for the benefit of both the ecological resources of the landscape as well as hazardous fuels reduction. Building upon the effects of the fire, manual and mechanical treatments (Section 2.4) would further help reduce fuel loads, specifically along key infrastructure, such as along fire roads and the ridgetops within the project area. Through the manual and mechanical manipulation of fuels in strategic locations, CA State Parks, STRL, SVF, SMRCD, and RCDSCC will increase opportunities to conduct prescribed broadcast burning (Section 2.4) over larger areas of the park in the next decade or more. Prescribed burn plots, or burn units, will be subdivided along preexisting abiotic features such as roads, trails, drainages, or other locations that represent a barrier to fire spread. In locations where there are no preexisting barriers, control lines will be established using manual and mechanical treatments to further compartmentalize the park into treatment units. Control lines will be established through a combination of vegetation removal and scraping of the duff and litter layer to bare mineral soil, while leaving nearby vegetation and roots intact to the extent feasible. Following burn operations control lines are typically rehabilitated and allowed to revegetate naturally. Burn units will be assigned treatment prescriptions that consider goals for the burn, expected fire behavior, available resources, weather parameters (relative humidity, wind direction and speed, temperature, etc.), as well as tactics for ignition.

These varied considerations will dictate the decisions land managers must make on when and where to implement prescribed fire and under what settings. In addition to providing immense ecological benefit, these treatments also create opportunities for CAL FIRE and other fire suppression agencies to make informed decisions on when, where, and how to employ firefighting tactics during the next wildfire. With preexisting control lines and locations with reduced fuel loads, fire suppression agencies may be afforded the opportunity to minimize significant ground disturbing activities should conditions allow; instead, relying on techniques such as back burning or backfiring to reduce fuel loads through targeted application of low intensity fire, in advance of the high intensity flaming front. In general, techniques such as hand lines and back burning operations will have less detrimental environmental effects compared to suppression techniques utilizing heavy equipment or fire retardant.

Numerous resource protection measures are outlined in this CalVTP PSA. These measures provide opportunities for significant avoidance, minimization, and mitigations, and are thoroughly evaluated in this PSA to understand the full extent of CEQA-compliance. Key measures include: biological and botanical surveys prior to project implementation, nesting bird and bat maternity roost surveys (if operations occur from February 1st to August 31st), no road building, mechanized operations on slopes less than 50%, no heavy equipment operations within WLPZs, canopy and native vegetation retention requirements, control of invasive exotic species, mitigations to reduce the spread of forest pests and pathogens, archaeological survey reports, requirements to follow local policies and public noticing, and a pre-operational meeting with contractors to educate and advise them of key natural resource issues, also see Section 2.8 for general actions that are completed prior to operations.

Environmentally sensitive habitat areas (ESHA) are present within a significant portion of the project area. As outlined in both the Santa Cruz and San Mateo County Forest Health and Fire Resilience PWP's, this project is designed provide ecological benefits and improve the habitat's fire resilience. CA State Parks intends to maintain and protect ESHA within the project area by adhering to the measures listed above and

the Coastal Vegetation Treatment Standards (CVTS) (Attachment D). Standard Project Requirements and Mitigation Measures to protect ESHA and sensitive natural communities are detailed thoroughly in the PSA checklist.

2.3 Treatment Types

This project proposes an Ecological Restoration Treatment Type to re-establish the composition, structure, pattern, integrity, and ecological processes needed to facilitate terrestrial and aquatic ecosystem sustainability, as stated in the PEIR (2.5.2 page 15). Specifically in the project area, forest management actions and vegetation treatments aim to restore natural processes and increase ecosystem resilience to future disturbance events and relative to modern anthropogenic and climatic influences, through reintroducing natural processes, or parallel treatments, such as the treatment activities outlined below in Section 2.4.

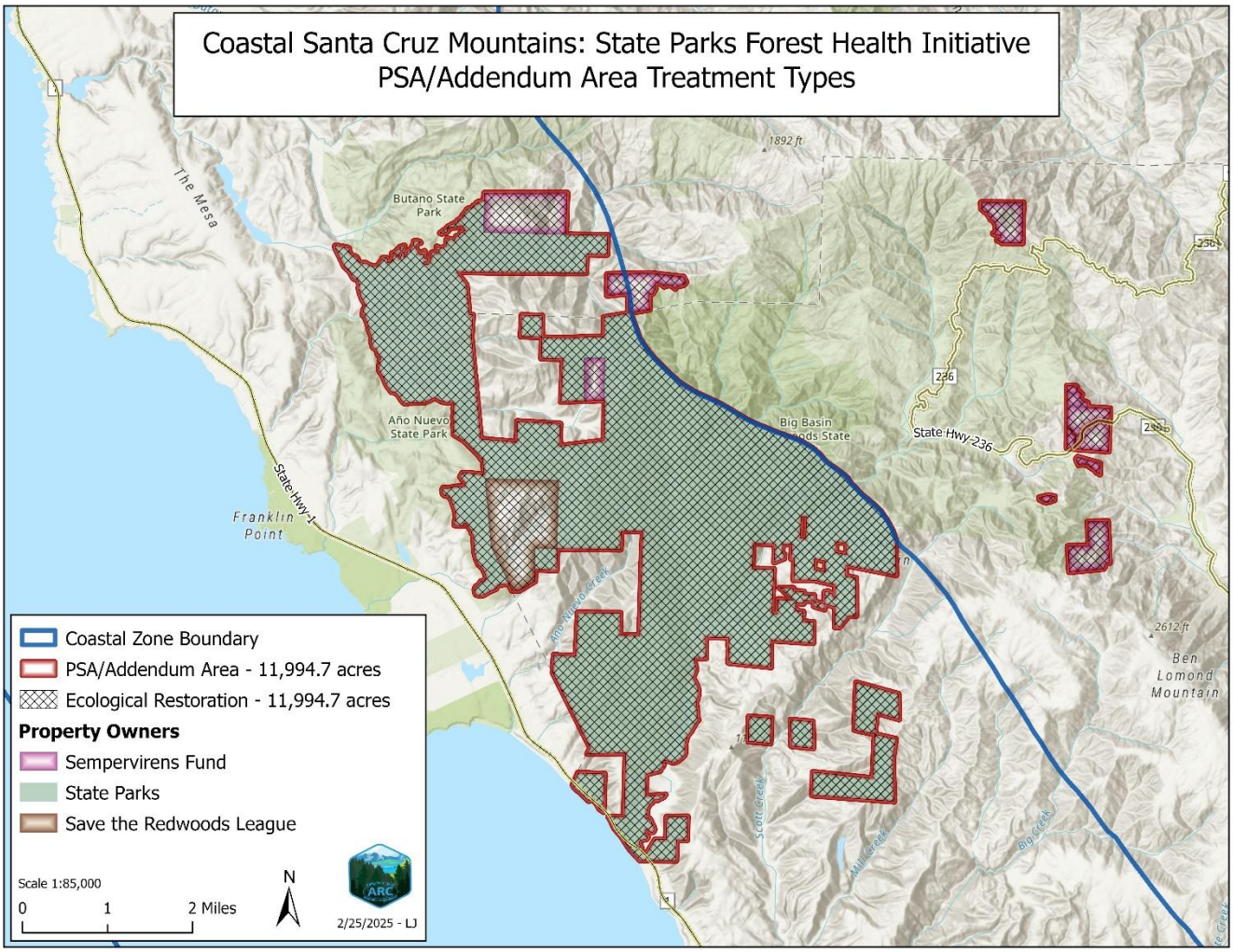
The ecological restoration treatment areas encompass several vegetation types including coastal redwood forest, Douglas-fir forest, oak woodland, shrubland, and grassland ecosystems. These ecosystems, as described in the Section 1.6 Ecosystem Conditions, experienced high severity fire across the park resulting in variable mortality across forested and vegetated communities. The current stage of post-fire succession is characterized by overly dense forest stands with continuous fuel loading as a new cohort of trees and understory vegetation compete for available resources and establish connectivity with dead standing trees. These conditions create a situation ripe for a fast-moving reburn of the area in expected hotter and drier conditions that will continue to support vegetation type change. In the face of these conditions, ecological restoration treatments will promote the health and vigor of live trees and decrease the connectivity of fuels to increase ecosystem resilience and biodiversity.

As described in both the Santa Cruz County and San Mateo County Forest Health and Fire Resilience PWP's, the project type falls under the Forest Health category, as they are designed to provide ecological benefits and improve the habitat's fire resilience, including within Environmentally Sensitive Habitat Areas (ESHA). CA State Parks intend to maintain ESHA within the project area by adhering to the Coastal Vegetation Treatment Standards outlined in each PWP (Attachment D). Furthermore, they intend to maintain the extent of mapped Manual of California Vegetation alliances and vegetation communities in the project area, except for instances where disturbance-dependent plant communities (i.e. oak woodlands, coastal grasslands) are being type converted due to encroachment of non-native woody species (e.g. Douglas-fir) or lack of disturbance.

CalVTP Treatment Type	CalVTP Treatment Activities	Treatment Size (acres)	Timing of CalVTP Treatments*
Ecological Restoration	Manual, mechanical (i.e. cutting, mastication, crushing, mowing, and piling), prescribed burning (i.e. broadcast burn, pile burn, and air curtain burn), and herbicide.	Up to 11,994.7 acres	Year-round*

Table 3: Proposed CalVTP Treatment Types

* State Parks would only implement prescribed burning during the burn window (typically fall through spring) when environmental conditions (windspeed, weather forecast, fuel moisture) are conducive.



Map 5: Treatment Types for PSA/Addendum

2.4 Treatment Activities

The proposed treatment activities for this project are prescribed burning, manual treatments, mechanical treatments, and targeted herbicide application. Each treatment activity is described in more detail below and consistent with the treatment activities described in the PEIR. Table 3 provides a summary of treatments and the maximum acreage of each treatment activity in the project area. Treatment activities could occur during any time of the year, consistent with seasonal and other timing restrictions required by the SPRs and MMs. Prescribed burning may occur any day of the week or time of day within identified burn prescription windows. Mechanical treatments, manual treatments, and targeted herbicide application could occur on any day of the week but would generally be limited to daylight hours.

CalVTP Treatment Activity	Equipment Used for Treatments	Typical Duration of Treatments	Maximum Treatment Size (acres)
Manual Treatment	Chainsaws, hand saws, brush cutters, pole saws, hand lopping tools, shovels, weed wrenches, weed whips, machetes, pruning shears, other hand tools and hand-operated power tools, and passenger vehicle(s)/all-terrain vehicle(s).	1 week to 6 months	Up to 11,994.70 acres
Mechanical Treatment	Tracked or wheeled masticators (i.e. skid steers or excavators with masticating heads), tracked and tow behind chippers, bull dozer or tractor with brush rake or ball and chain crushing apparatus, loader with bucket and thumb attachments to pile material for burns or chipping, wheeled skidders, fire suppression vehicles and equipment (i.e. water apparatus, hand tools, etc.), and passenger vehicle(s)/all-terrain vehicle(s).	1 week to 1 year	Up to 2,179.5 acres
Prescription Burning – Broadcast Burning	Drip torch/ terra torch, aerial ignition devices, water tender, excavator, fire suppression vehicles and equipment (i.e. water apparatus, fire engines, bull dozers, tractors, skidders, mowers, loader, excavator, hand tools, etc.), and passenger vehicle(s)/all-terrain vehicle(s).	1 day to 2 weeks	Up to 3,346.9 acres
Prescription Burning – Pile Burning	Drip torch/ terra torch, aerial ignition devices, water tender, excavator, fire suppression vehicles and equipment (i.e. water apparatus, fire engines, bull dozers, tractors, skidders, mowers, loader, excavator, hand tools, etc.), and passenger vehicle(s)/all-terrain vehicle(s).	1 day to 1 month	Up to 11,994.70 acres*
Targeted Herbicide Application	Batch truck, application devices (i.e. backpack sprayer, manual brush applicator), and passenger vehicle(s)/all-terrain vehicle(s).	1 day to 2 weeks	Up to 13 acres

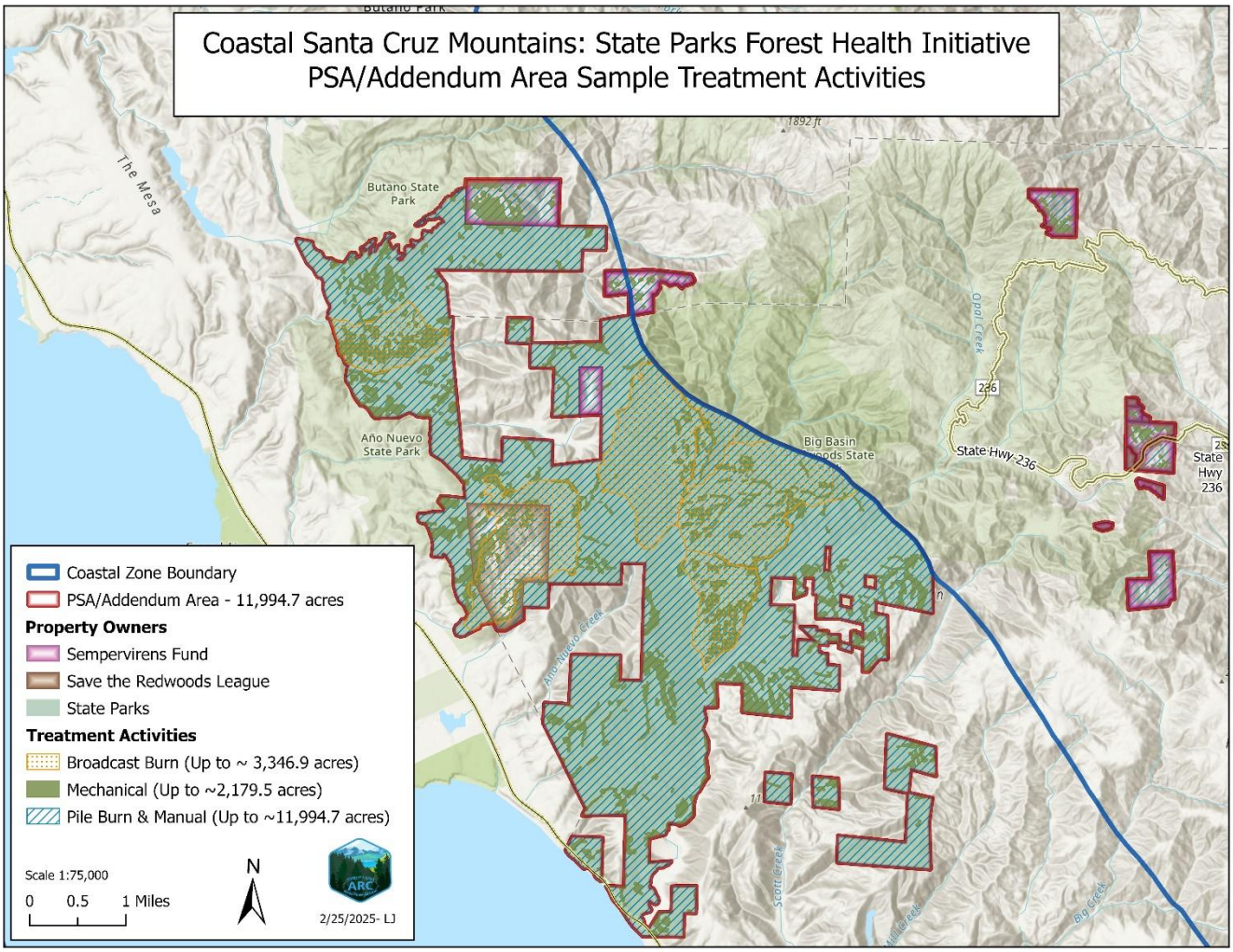
Table 4: Proposed CalVTP treatment activities.

* Because it is not feasible to pre-identify where all possible watercourses, sensitive resources, or other limiting circumstances will occur across the project area prior to on the ground implementation, pile burning is proposed on up to a maximum of 11,994.7 acres, with the expectation that fewer acres will likely be treated due to the previously mentioned limitations.

CalVTP Treatment Activity	Maximum Treatment Size (Acres) Within CZ (SC PWP)	Maximum Treatment Size (Acres) Within CZ (SM PWP)	Maximum Treatment Size (Acres) Outside CZ (SC County)	Maximum Treatment Size (Acres) Outside CZ (SM County)	Total Maximum Treatment Size (Acres)
Manual	8,876.3	2,569.6	443.6	106.5	Up to 11,994.7 acres
Mechanical	1,390	627.4	143.6	19.4	Up to 2,179.5 acres
Prescribed Burning – Broadcast Burning	2,952.8	395.1	0.0	0.0	Up to 3,346.9 acres
Prescribed Burning – Pile Burning	8,876.3	2,569.6	443.6	106.5	Up to 11,994.7 acres*
Targeted Herbicide Application	Up to 9 acres	Up to 2 acres	Up to 1 acre	Up to 1 acre	Up to 13 acres

Table 5: Proposed CalVTP treatment activities within Coastal Zone and by PWP Program Area

* Because it is not feasible to pre-identify where all possible watercourses, sensitive resources, or other limiting circumstances will occur across the project area prior to on the ground implementation, pile burning is proposed on up to a maximum of 11,994.7 acres, with the expectation that fewer acres will likely be treated due to the previously mentioned limitations.



Map 6: Sample Treatment Activity Map for PSA/Addendum.

*Because it is not feasible to pre-identify where all possible watercourses, sensitive resources, or other limiting circumstances will occur across the project area prior to on the ground implementation, pile burning is proposed on up to a maximum of 11,994.7 acres, with the expectation that fewer acres will likely be treated due to the previously mentioned limitations.

2.4.1 Mechanical Treatments

Mechanical treatments may occur on up to 2,179.5 acres, primarily on flat to moderate slopes less than 40% in slope and no greater than 50%. Equipment may operate on a stable, existing road surface and reach off of the road to treat slopes greater than 50% but shall not travel off of the road surface in those instances. Masticators may be used to remove dense stands of understory vegetation and ladder fuels, including small diameter trees, to maintain a healthy overstory or prepare an area for a prescribed burn. Machinery may also be used to remove and transport larger trees for biomass removal to meet ecological objectives. As stated in the CalVTP PEIR Section 2.5.2, mechanical treatments are designed to cut, uproot, crush/compact, or chop target vegetation. Mechanical equipment may include but is not limited to tractors, skidders, chippers, excavators, skid steers, and masticators. Treatments are typically implemented with up to three crews each consisting of two to 10 members. The duration of mechanized treatments varies greatly depending on treatment area conditions and the acreage to be treated. Under this project, mechanical treatment could be implemented over as little as a one-week time period to an 18-month time period.



Figure 1. Example of mechanical treatment before (left) and after (right) in Butano State Park under the Butano State Park Forest Health PSA/Addendum (Photo courtesy of David Cowman).

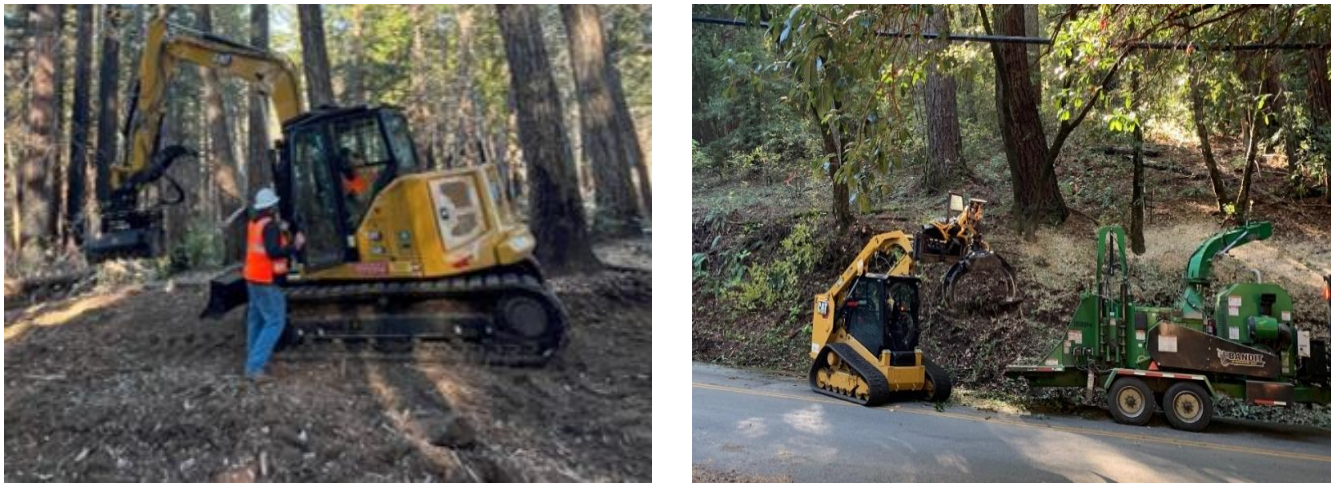


Figure 2. Examples of Mechanical Equipment – Cat 308 excavator with masticating head attachment (left). Cat 299 skid steer with grapple attachment (right).



Figure 3. Example of conditions after mechanical treatment at Butano State Park, with a mosaic of elderberry *(Sambucus spp.)* and huckleberry *(Vaccinium spp.)* retained in the understory.

2.4.2 Manual Treatments

Manual treatments may occur on up to 11,994.7 acres in the project area. As described in the CalVTP PEIR Section 2.5.2., these treatments use hand tools and hand-operated power tools, including chainsaws, hand saws, brush cutters, pole saws, and loppers to cut, clear, and/or prune trees, herbaceous vegetation, trees, and woody shrubs and increase space between trees. Manual treatments are generally not limited by slopes and can be implemented in locations otherwise not accessible for mechanical treatment.

To implement manual treatments, one or two crews of approximately three to 20 members would use hand tools and hand operated power tools to cut, clear, and/or prune trees, herbaceous vegetation, and woody shrubs. The duration of manual treatment varies greatly depending on treatment area conditions, the acreage to be treated, and the size of the hand crew. Under this project, manual treatment could be implemented over as little as one-week time period to an 18-month time period.



Figure 4: Example of manual treatments before (left) and after (right) implemented at Butano State Park under the Butano State Park Forest Health PSA/Addendum (Photo courtesy of ARC).

2.4.3 Prescribed Burning

Broadcast Burning

This project proposes to use broadcast burning on up to 3,346.9 acres to reduce fuels over a large area, irrespective of equipment access, slopes, or other factors prohibiting the use of other methods. It will be used to reintroduce appropriate fire regimes and reduce the continuity of dead, downed, and overly dense fuels. Prescribed fire will be used in grass and shrub fuel types to maintain current species assemblages and prevent ongoing type conversion to less fire-tolerant communities. Prescribed broadcast burns typically last approximately one day up to two weeks where the average number of workers is approximately 50. Equipment used for a broadcast burn includes between two and ten engines, up to two bulldozers and bulldozer transports, masticators or track chippers, mechanized hand tools, and an onsite water truck for fire suppression. All burning will be implemented using burn plans and under the guidance of a California State Parks certified Burn Boss, or an equivalent qualification if working with a different agency.

Pile Burning

Pile burning is proposed within up to 11,994.7 acres of the project area as a means of biomass removal for residual fuels following manual treatments. As described in the CalVTP PEIR, pile burning can be used as a means of reducing fuel load, as well as to restore and maintain appropriate fire regimes. Pile burning may occur over a one day to one month period where the average number of workers onsite for pile burning is 10. Equipment used for pile burning typically includes two Type 6 engines and an onsite water truck for fire

suppression. All burning will be implemented using burn plans and under the guidance of a California State Parks certified Burn Boss, or an equivalent qualification if working with a different agency.

Pile burning is generally used in locations where access to mechanical equipment is infeasible or as a sensitive alternative to mechanical removal of biomass. It is not typically conducted in areas with steep slopes or complex topography, dense vegetation, or conditions that make it otherwise unsafe or infeasible to conduct pile burning activities. In adherence to applicable SPRs and mitigation measures, pile burning will not occur in areas with hydrologic features or sensitive resources. For example, SPR HYD-4 requires the identification and protection of watercourse and lake protection zones (WLPZ) around hydrologic features and prohibits burning piles within the WLPZ. Because it is not feasible to pre-identify where all possible watercourses, sensitive resources, or other limiting circumstances will occur across the project area prior to on the ground implementation, pile burning is proposed on up to a maximum of 11,994.7 acres, with the expectation that fewer acres will likely be treated due to the limitations described above.

A description of applicable SPRs and Mitigation Measures that are included in the project are further discussed in Section 4.0 and Attachment A.

Cultural Burning

Included under prescribed burning is cultural burning, a practice associated with indigenous land stewardship under which burning is conducted for the aforementioned ecological and wildfire management benefits, as well as cultural and traditional purposes. Cultural burning practices, which can differ from the prescribed burning described in this section in terms of size, seasonality, timing, prepping/planning, and post-fire treatment, were significantly limited by colonization and the persecution of Native people and their land. However, in recent years efforts to reintroduce indigenous land stewardship practices continue to shape statewide approaches to wildland fire management (Wildfire and Forest Resilience Task Force, 2022).

In this PSA/Addendum, cultural burning could be considered under either broadcast burning or pile burning and would be implemented in accordance with regulations, SPRs, and mitigation measures associated with these treatment activities. This would include the preparation and implementation of a burn plan and a smoke management plan, when applicable, and obtaining any required permits to conduct the burn from fire authorities.



Figure 5. Example of prescribed burning of burn piles before (left) and after (right) in Henry Cowell State Park (Photo courtesy of CA State Parks)

2.4.4 Targeted Herbicide Application

Herbicides may be used to prevent the spread and re-sprouting of exotic invasive species within the treatment areas, predominantly along roads and other highly trafficked or disturbed locations. All herbicide applications will be applied directly by hand via cut stump, spot, or foliar spray. When applying herbicide treatments, crews typically search a large area and only apply spot herbicide treatments for isolated patches of invasive species, which has historically been less than 1% of the total search area. Spread across the entirety of the project area, it's expected that herbicide treatments will occur on less than 13 acres total, with approximately 2 acres occurring within the San Mateo PWP, 9 acres occurring within the Santa Cruz PWP, and 2 acres occurring outside the coastal zone. Herbicides will be used following initial and maintenance treatments to treat invasive or other undesirable plant species. These species are likely to include French Broom, big leaf periwinkle (*Vinca major*), *Hedera helix, Vinca minor, Ammophila arenaria, Rubus armeniacus,* and Jubata grass, however additional species may be targeted throughout the duration of the project and maintenance activities. Herbicides used under this PSA/Addendum will be consistent with those listed in the CalVTP Final PEIR Volume II Section 2.5.2.

Consistent with the CalVTP (CalVTP Final PEIR Volume II Section 2.5.2) herbicide will only be applied at ground-level from equipment on vehicles or by manual application devices and must comply with the U.S. Environmental Protection Agency directions, as well as California Environmental Protection Agency and Department of Pesticide Regulation label standards. Concurrent with the Department of Parks and Recreation Practices, the project proponent will comply with all laws and regulations governing the use of herbicides for this project.

Typically, targeted herbicide application is carried out by a crew of two to four workers and occurs within a one-week time period.

2.5 Biomass Disposal

Vegetation removed during implementation of the proposed treatments described will primarily be disposed of via mastication, chipping and broadcasting throughout the treatment area, lop and scattering, pile and broadcast burning, and incineration with a curtain burner or similar machine. In order to conduct these disposal methods, woody material may be hauled, skidded, and decked to be processed. Whole logs may be stored on site for later disposal, and where current biomass disposal methods exceed immediate capacity, off hauling excess chipped material will be delivered to off-site properties. Should chips from throughout the project area be off hauled, the project proponent will acquire written acceptance of the volume of chips. The biomass disposal methods are further described as follows (a percent of biomass to be treated through each processing method is estimated for initial treatments and analysis purposes):

Mastication

Mastication, or the mulching of vegetation and woody debris, occurs concurrently with mechanical vegetation removal where all masticated material is left on the ground. Residual masticated material shall remain uniformly spread to the extent feasible and shall not exceed a depth of approximately 6 inches and should average approximately three inches. Stumps shall be cut to no higher than 6 inches above the ground and have a smooth, flat appearance. Mastication is estimated to account for approximately **30** percent of biomass under this PSA/Addendum

Chipping

Manually cut vegetation may be cut and chipped back into the treatment area, not to exceed a depth of approximately 6 inches and should average approximately 3 inches. Chipping is estimated to account for approximately **10** percent of biomass under this PSA/Addendum.

Lop and Scatter

Vegetation may be cut using hand saws, pole saws, chainsaws, or other hand-operated tools not to exceed a depth of approximately 18-24 inches in limited areas where smaller depths are infeasible due to access and other constraints. This target depth is lower than the slash depth standards for forestry operations in the Santa Cruz Mountains per the Forest Practice Rules and is necessary because of the large amount of biomass that will be produced in portions of the project area with high densities of trees and vegetation. Every effort will be made to maximize ground contact of cut material to increase decomposition rates and reduce fuel heights.

CA State Parks typically follows lop and scatter treatments with broadcast burning or pile burning to reduce concentrations of surface fuel loads. Lop and scatter treatments are generally only used in instances where access is limited and there are no other feasible alternative options for biomass treatments. While CA State Parks anticipates that in most cases it will be feasible to achieve a maximum slash depth well below 24 inches, the 24-inch limit is needed for situations in which hand treatments are necessary and there are high densities of trees and vegetation but there are no other feasible biomass disposal alternatives due to access or other unforeseen circumstances.

Lop and scattered material is estimated to account for approximately **15** percent of biomass under this PSA/Addendum.

Pile Burning

Cut material may be stacked and piled to be burned at a later date. Piles will not exceed 20 feet in length, width, or diameter and will average 6 feet in length, width, and diameter. Piles will not be located in any Watercourse and Lake Protection Zones. Burn piles may be covered with plastic, or other appropriate means, to maintain low fuel moisture in the area designed for ignition. Pile burned material is estimated to account for approximately **17.5** percent biomass under this PSA/Addendum.

Broadcast Burning

Broadcast burning may occur in designated burn units under pre-determined site-specific conditions. Burn units may overlap with other treatment activities, where fire may be used as a vegetation maintenance tool to consume understory vegetation and woody debris. Site preparation for burn units will primarily include mastication, chipping, crushing, cutting, lopping and scattering, or other vegetation pre-treatments along designated control lines and intermediate controls as appropriate. Broadcast burning is estimated to account for approximately **25** percent of biomass under this PSA/Addendum.

Air Curtain Burner and Carbonization

Air curtain burning and carbonization are new technologies designed to consume biomass within fireboxes. These technologies utilize heavy equipment for loading biomass into the fireboxes and are generally set up in large, open areas that are clear of vegetation.

When feasible, biomass resulting from mechanical or manual treatments, such as large material considered inefficient for chipping or other processing methods, would be disposed of using air curtain burning or carbonization. Air curtain burners would be set up on existing roadways and/or landings that meet the qualifications for their use, which comprise level, previously disturbed areas that are devoid of vegetation. Biomass would be carried from the work sites to the burner and fed into the air curtain burner through the use of heavy machinery. The location of the air curtain burner or carbonizer considers its proximity to landings and roads that would be utilized to transport material to the firebox. Once the burning is complete and the produced wood ash has cooled, the ash and biochar may be distributed throughout the treatment area where the biomass originated or be hauled off site for donation to willing recipients, as outlined in the accompanying wasted discharged plan.

The depth of biochar and ash will not exceed approximately 4 inches at any location within the project area. If it is not feasible to distribute biochar and ash within the treatment area in this way, biochar may also be hauled off-site for beneficial use at agricultural or other facilities in the area. Multiple air curtain burners could be operated simultaneously as part of the proposed project. A burner requires a crew of two to three people per burner and operating multiple burners next to each other would not necessarily require additional people. Air curtain burners have been designed to consume biomass quickly and efficiently with a substantial reduction in smoke.

Material that is processed through air curtain burning and carbonization is estimated to account for approximately **5** percent of biomass under this PSA/Addendum.

Biomass Hauling

Material that results from treatment activities, such as material processed through chipping or air curtain burning and carbonization or whole logs, may be hauled off site and donated to nearby willing recipients, such as privately owned farms or creek restoration projects, for example, due to the lack of nearby biomass processing facilities. A waste disposition plan will outline the hauling locations prior to biomass being hauled off site. For the purposes of this PSA/Addendum, biomass hauling is not expected to exceed a hauling distance of 15 miles from the project area. Biomass hauling is estimated to account for approximately **2.5** percent of biomass under this PSA/Addendum.

2.6 Fuel Types

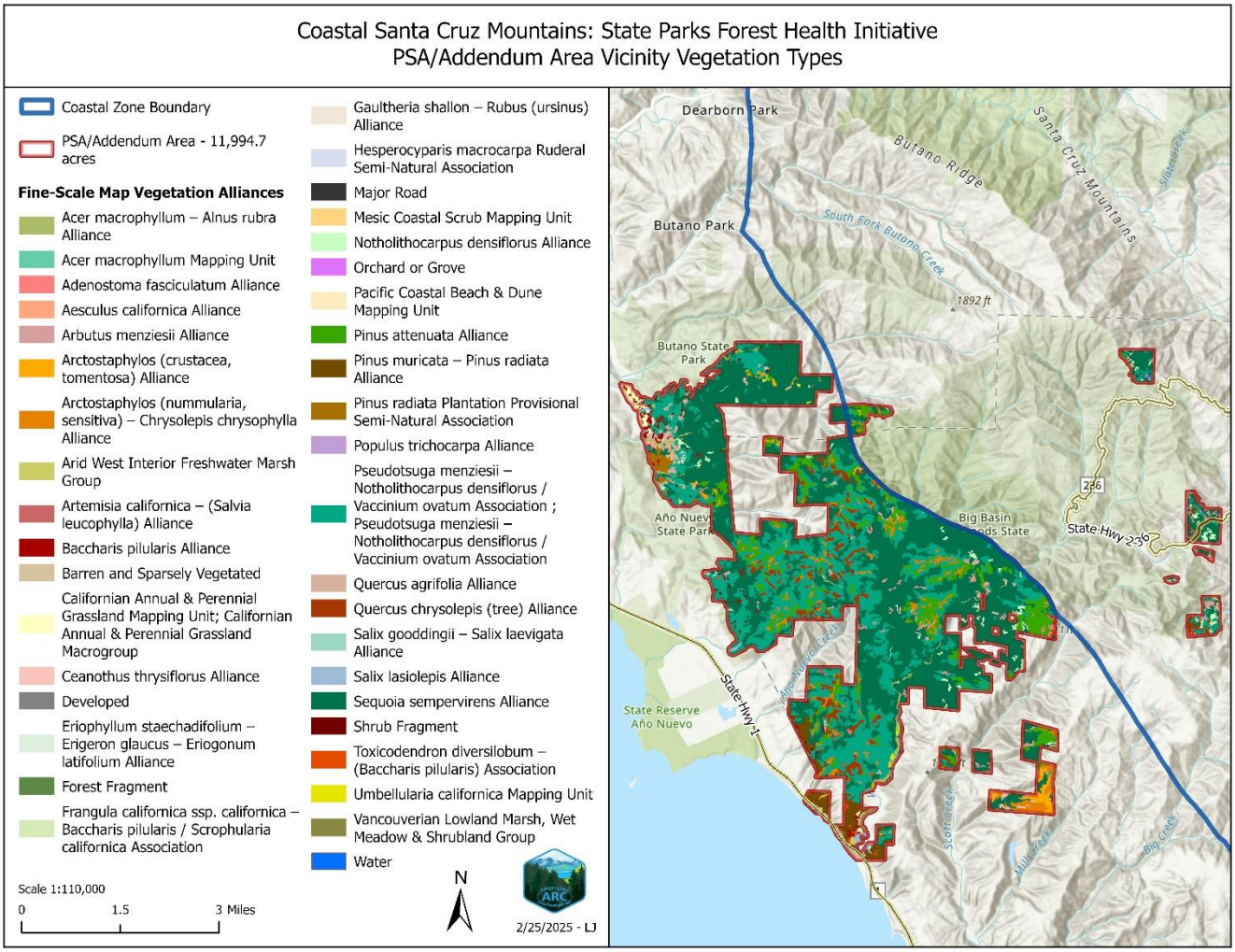
Proposed treatments would occur predominantly in tree fuel types with a shrub fuel type component in the understory, in addition to grassland and shrubland dominant fuel types that may be treated with prescribed fire.

Within the PSA/Addendum area, the tree fuel type is predominantly comprised of the coast redwood forest type, specifically, the Sequoia sempervirens Alliance (Map 7). Various other tree fuel types are found within the PSA/Addendum area including forest types dominated by Douglas-fir, tanoak, madrone, oak woodland,

and knobcone pine. The coast redwood and Douglas-fir stands are dominated by an understory composed of moderate to dense understory fuels including native shrubs and vines such as huckleberry (*Vaccinium spp.*), poison oak (*Toxicodendron diversilobum)*, red elderberry (*Sambucus racemosa)*. Mixed hardwood forests maintain similar understory characteristics and are dominated by Pacific madrone, tanoak, and live oak species. Where the CZU Fire burned at higher severities in all tree fuel types, understories are dominated by thick regenerative *Ceanothus spp.* and coastal coppice sprouting species, such as redwood, tanoak, madrone, and huckleberry.

The shrub fuel type spans a relatively smaller footprint of the PSA/Addendum area where shrub alliances cover ridgetops and moderate slopes in upper elevations (Map 7). The shrub fuel type is predominately comprised of manzanita dominant vegetation types, specifically the Arctostaphylos (crustacea, tomentosa) Alliance and Arctostaphylos (nummularia, sensitivia) – Chrysolepis chrysophylla Alliance. Various other shrub vegetation types are intermixed throughout the project area.

The grass fuel type is predominantly comprised of Californian Annual & Perennial Grassland Macrogroup and spans various relatively small areas in the eastern half of the PSA/Addendum area (Map 7).



Map 7: Vegetation Communities and Alliances within PSA/Addendum area.

2.7 Treatment Funding and Maintenance

CA State Parks and its partners intend to pursue a variety of opportunities to fund the implementation of treatments proposed in this PSA/Addendum. They intend to submit the potential treatments and projects

described in this PSA/Addendum to the Santa Cruz Mountains Regional Prioritization Plan, a process facilitated by the RCDs to develop a suite of prioritized projects across the region to identify potential funding opportunities and support grant applications. In the future CA State Parks and its partners plan to include this project in applications for various grant funded opportunities such as the CALFIRE Forest Health Grant Program. Furthermore, where applicable, CA State Parks intends to fund portions of this project via the State Parks Cannabis Watershed Protection Program, a multidisciplinary team created in 2019 with Proposition 64 funding that is dedicated to restoring watersheds affected by illegal cannabis cultivation. The timing of initial treatment implementation for this project will be dependent on availability of funding but is expected to occur throughout the lifetime of each PWP, which conclude on July 7th, 2031. Initial treatments may occur beyond July 7th, 2031, if the PWPs are renewed or extended beyond that date and a subsequent NOID is approved.

Maintenance treatments or re-treatments will be based on monitoring of the site conditions. It is estimated that they may occur immediately following initial treatments (such as prescribed fire, mechanical, manual, or targeted herbicide) or approximately every three to ten years, or if the qualified professional/lead agency determines the initial treatment did not obtain the appropriate result (e.g. the prescribed fire treatment did not result in the appropriate treatment outcome). Maintenance treatment methods may employ the same vegetation treatment activities used in the initial treatment or introduce a new treatment activity presented in this PSA/Addendum; for example, mechanized initially treatments may be maintained with prescribed fire treatments. In compliance with the PWPs, maintenance treatments may occur throughout the lifetime of each PWP, which conclude on July 7th, 2031. Maintenance treatments may occur beyond July 7th, 2031, if the PWPs are renewed or extended beyond that date and a subsequent NOID is approved.

Re-treatment in ecological restoration areas will give consideration to the natural fire return interval (i.e. time since last burn is greater than or equal to the average fire return interval for the habitat type) of a given vegetation type and existing conditions, prior to implementing a maintenance treatment. Treatment activities that do not use fire (i.e. manual treatments, mechanical treatments) are considered “fire surrogates”. In the absence of additional data regarding mechanical and manual treatment activities, fire return interval is used as a proxy for disturbance (e.g. manual treatments may be analogous to low severity fire, mechanical treatment may be analogous to a mixed severity fire). Follow up maintenance treatment to target invasive species may occur at any time.

Maintenance treatments will generally be lower intensity and scale than initial treatments. Prior to implementing maintenance treatments, the project proponent will determine the natural, or ecologically appropriate, fire return interval of the habitat(s) to be retreated and the project proponent will verify that the expected site conditions as described in the PSA/Addendum are present in the treatment area(s). Additionally, pursuant to SPR BIO-5, all treatments and the maintenance treatment interval will be designed to maintain habitat function of the specific chaparral vegetation alliance being treated and to avoid type conversion of chaparral. Mixed chaparral stands throughout the park, all of which experienced high intensity wildfire in 2020, will be allowed to reestablish naturally post-fire. In instances where conifers are encroaching into and replacing stands of chaparral, treatments will focus on removal of encroaching conifers to maintain the extent of chaparral communities. These stands of chaparral will ideally be maintained in the future through prescribed fire as determined necessary by California State Park biologists and botanists. Chaparral exists adjacent to redwood stands within prescribed burn plots. These stands, to the extent feasible, will not be actively ignited during prescribed burns that occur at an interval more frequent than that required to maintain them as chaparral.

Prior to implementing maintenance treatments, the project proponent will determine the natural fire return interval of the habitat(s) to be retreated and will verify that the expected site conditions as described in the PSA/Addendum are present in the treatment area.

As time passes, the continued relevance of the PSA/Addendum will be considered by the project proponent in light of potentially changed conditions or circumstances. If environmental conditions evolve or project approaches change to the degree that the project proponent finds new or substantially more severe impacts may occur, it will determine whether a new PSA/Addendum or other environmental analysis is warranted.

2.8 Guidance Following PSA Approval

General Actions to Implement Treatment Activities

The purpose of the list of General Actions to Implement Treatment Activities is to provide guidance to the implementing entity to ensure that all steps necessary to commence treatments described in the PSA/Addendum are complete prior to operations; this list serves as a timeline and checklist that may be applied to each phase of treatment implementation. Some actions listed below will be completed during the development of the PSA/Addendum, while others must be completed in respect to individual implementation periods (i.e., phases of treatments, initial treatments, maintenance treatments). This checklist is intended to be used in conjunction with the MMRP located in *Attachment A*.

1. Protocol-level botanical surveys are complete and sensitive species are flagged (SPR BIO-1, SPR BIO-3, and SPR BIO-7).
2. Protocol-level wildlife and nursery site surveys are complete and sensitive species are flagged (SPR BIO-1 and SPR BIO-10).
3. The Archaeological Survey Report process is complete and archaeological sites are flagged for avoidance and protection (SPR CUL-4, SPR CUL-5, and SPR CUL-7).
4. Burn plan complete – if necessary (SPR AQ-3).
5. Smoke Management plan obtained – if necessary (SPR AQ-2).
6. Prepare draft treatment operations maps that include, but are not limited to existing roads, existing stream crossings, staging areas, access points, watercourses and other sensitive resources, specify treatment activity areas, and potential unstable areas (SPR AD-2).
7. CalVTP PSA noticing requirements to neighbors and other appropriate entities are complete (SPR AD-4, SPR AD-6, SPR CUL-2, SPR HAZ-9, SPR NOI-6, and SPR REC-1).
8. Final field verification of treatment units that include flagging all sensitive resources including but not limited to sample treatment areas flagged for retention, access points, staging areas, property lines where necessary, watercourse and lake protection zones, unstable areas, and existing stream crossings.
9. When necessary, begin contract bid process and conduct bid walk with contractors explaining the treatment prescription and associated activities. Show sample treatment areas.
10. Pre-treatment activity surveys are complete and sensitive resources have been flagged (SPR BIO-7 and SPR BIO-10).
11. Nesting bird surveyors are under contract and ready to conduct surveys (SPR BIO-12).
12. Environmental awareness training and cultural resource training are complete with contractors and treatment operations begin (SPR BIO-2 and SPR CUL-8).
13. Supervision of contractors occurs consistently throughout project implementation, as determined to be necessary
14. Implementation meetings occur 2-4 times a month to keep track of operations and ensure appropriate sensitive resource protection, or at a frequency deemed necessary by the project proponent.
15. Roads and other appropriate infrastructure are closed out with necessary erosion control measures as winter approaches (SPR GEO-5).

16. Roads and other appropriate infrastructure are checked during the winter-period to ensure that no erosion issues are occurring as a result of treatment operations (SPR GEO-4).

3.0 Environmental Checklist

VEGETATION TREATMENT PROJECT INFORMATION

1. **Project Title:** Coastal Santa Cruz Mountains: State Parks Forest Health Initiative
2. **Project Proponent Name and Address:** California Department of Parks and Recreation

   303 Big Trees Park Road, Felton CA 95018
3. **Contact Person Information and Phone Number:** Portia Halbert (Senior Environmental Scientist)

   portia.halbert@parks.ca.gov

   831-251-2883
4. **Project Location:** Coastal portions of Big Basin Redwoods State Park Butano State Park, and Año Nuevo State Park, and properties owned by Save the Redwoods League and Sempervirens Fund

   Santa Cruz and San Mateo Counties

   PSA/Addendum Area Centroid Coordinates:
   Longitude (X): -122.2890192
   Latitude (Y): 37.1584713
   Also see maps 3 and 4 above
5. **Total Area to be Treated (acres)** Up to 11,994.7 acres
6. **Description of Project**: (Describe the whole action involved, including any phasing of initial treatments as well as planned treatment maintenance, including equipment to be used and planned duration of treatments. Provide cross reference to specific subsections and page numbers from Chapter 2 of the PEIR to demonstrate that treatments are consistent with those analyzed in the PEIR. Attach additional sheets if necessary.)

   See Section 2.0 Project Description above for a detailed description of the project, including initial treatment prescriptions, planned treatment maintenance, equipment used for treatment activities, and planned duration of treatments with cross reference to specific subsections of the PEIR. In addition, Section 2.0 Project Description provides a detailed description of the proposed treatment types, treatment activities, and fuel types for initial and maintenance treatments.

   a. **<u>Initial Treatment</u>**
      Initial Treatments are described in Section 2.0 Project Description and generally include manual, mechanical, prescribed fire (pile burn and broadcast burn), and herbicide treatments within the ecological restoration treatment type.

   Treatment Types *[see description in CalVTP PEIR Section 2.5.1, check every applicable category; provide detail in description of Initial Treatment*]

   ☐ Wildland-Urban Interface Fuel Reduction

   ☐ Fuel Break

   ☒ Ecological Restoration

Treatment Activities [*see description in CalVTP PEIR Section 2.5.2, check every applicable category; include number of acres subject to each treatment activity, provide detail in description of Initial Treatment*]

☒ Prescribed Burning (Broadcast), _____Up to 3,346.9__ acres

☒ Prescribed Burning (Pile Burning): Up to 11,994.7 acres

☒ Mechanical Treatment, ____Up to 2,179.5___ acres

☒ Manual Treatment, ___Up to 11,994.7____ acres

☐ Prescribed Herbivory, _____ acres

☒ Herbicide Application, ___Up to 13____ acres

Fuel Type [*see description in CalVTP PEIR Section 2.4.1, check every applicable category; provide detail in description of Initial Treatment*]

☒ Grass Fuel Type

☒ Shrub Fuel Type

☒ Tree Fuel Type

b. <u>Treatment Maintenance</u>

Maintenance treatments, or re-treatments, would be based on monitoring of the site conditions but is estimated to occur immediately following initial treatments (i.e., prescribed fire, mechanical, manual, targeted herbicide or prescribed herbivory) or approximately every three to ten years, or if the qualified professional/lead agency determines that the initial treatment did not obtain the appropriate results (e.g. the prescribed fire treatment did not result in the appropriate treatment outcome representative of the results expected from the average fire return interval). Maintenance treatment methods may employ the same vegetation treatment activities used in the initial treatment or introduce a new treatment activity presented in this PSA/Addendum; for example, mechanized initial treatments may be maintained with prescribed fire treatments.

Re-treatment in ecological restoration areas will give consideration to the natural fire return interval (i.e., time since last burn is greater than or equal to the average fire return interval for the habitat type) of a given vegetation type and existing conditions, prior to implementing a maintenance treatment. Treatment activities that do not use fire (i.e., manual treatments, mechanical treatments) are considered “fire surrogates”. In the absence of additional data regarding mechanical and manual treatment activities, fire return interval is used as a proxy for disturbance (e.g., manual treatment may be analogous to low severity fire, mechanical treatment may be analogous to a mixed severity fire). Follow-up maintenance treatment to target invasive species may occur at any time.

Maintenance treatments would generally be lower intensity and scale than initial treatments. Prior to implementing maintenance treatments, the project proponent will determine the natural fire return interval of the habitat(s) to be retreated, and the project proponent would verify that the expected site conditions as described in the PSA/Addendum are present in the treatment area(s). Additionally, pursuant to SPR BIO-5, all treatments and the maintenance treatment interval will be designed to maintain habitat function of the specific chaparral vegetation alliance being treated and to avoid type conversion of chaparral.

As time passes, the continued relevance of the PSA/Addendum will be considered by the project proponent in light of potentially changed conditions or circumstances. If environmental conditions evolve or project approaches change to the degree that the project proponent finds new or

substantially more severe impacts may occur, it will determine whether a new PSA/Addendum or other environmental analysis is warranted.

Treatment Types *[see description in CalVTP PEIR Section 2.5.1, check every applicable category; provide detail in description of Treatment Maintenance*]

☐ Wildland-Urban Interface Fuel Reduction

☐ Fuel Break

☒ Ecological Restoration

Treatment Activities [*see description in CalVTP PEIR Section 2.5.2, check every applicable category; include number of acres subject to each treatment activity, provide detail in description of Treatment Maintenance*]

☒ Prescribed Burning (Broadcast), ____3,346.9___ acres

☒ Prescribed Burning (Pile Burning), 11,994.7 acres

☒ Mechanical Treatment, ___2,179.5____ acres

☒ Manual Treatment, ___11,994.7____ acres

☐ Prescribed Herbivory, _____ acres

☒ Herbicide Application, ___13____ acres

Fuel Type [*see description in CalVTP PEIR Section 2.4.1, check every applicable category; provide detail in description of Treatment Maintenance*]

☒ Grass Fuel Type

☒ Shrub Fuel Type

☒ Tree Fuel Type

Use of the PSA for Treatment Maintenance

Prior to implementing a maintenance treatment, the project proponent will verify that the expected site conditions as described in the PSA are present in the treatment area. As time passes, the continued relevance of the PSA will be considered by the project proponent in light of potentially changed conditions or circumstances. Where the project proponent determines the PSA is no longer sufficiently relevant, the project proponent will determine whether a new PSA or other environmental analysis is warranted.

In addition to verifying that the PSA continues to provide relevant CEQA coverage for treatment maintenance, the project proponent will update the PSA at the time a maintenance treatment is needed when more than 10 years have passed since the approval of the PSA or the latest PSA update. For example, the project proponent may conduct a reconnaissance survey to verify conditions are substantially similar to those anticipated in the PSA. Updated information should be documented.

7. Regional Setting and Surrounding Land Uses:

The entirety of the project is located within the Santa Cruz Mountains. Big Basin Redwoods State Park spans from the Pacific Coast at the Waddell Creek outlet in Davenport, California to the northern-most portions of China Grade and west to Waterman Gap in Boulder Creek, California. Butano State Park is located north of Big Basin Redwoods State Park near the town of Pescadero. Ano Nuevo State Park lies to the west of Big Basin Redwoods State Park and south of Butano State Park.

The Cascade Creek property is surrounded by Big Basin Redwoods and Ano Nuevo State Park. Properties owned by the Sempervirens Fund all connect to portions of Big Basin Redwoods or Butano State Park.

Adjacent lands are predominantly privately owned and include a mix of residences and timberland owners. Other State Parks are located nearby, such as Castle Rock State Park and Portola Redwoods State Park.

Additional information regarding the regional setting and surrounding land use is provided in section 1.5 Project Location and Site above.

8. **Other Public Agencies Whose Approval is Required**: (e.g., permits)

- Consult noticing required by the CalVTP was met by submitting a project description, species status list, and pertinent maps to the California Department of Fish and Wildlife (CDFW) during the planning phase of this project on May 9, 2025; no comments were received by the end of the 30-day comment window on June 8, 2025.
- Consult noticing required by the CalVTP was met by submitting a project description, species status list, and pertinent maps to the United States Fish and Wildlife Service (USFWS) during the planning phase of this project on May 9, 2025; since this project spans both San Mateo and Santa Cruz County, notices were reviewed by the Sacramento USFWS office and the Ventura USFWS. Comments were received from the Sacramento office on May 30, 2025 and were incorporate into the PSA project design if they were not already appropriately covered by the SPRs and Mitigation Measures. No comments were received from the Ventura office by the end of the 30-day comment window on June 8, 2025.
- Smoke management plans will be prepared for the Monterey Bay Air Quality Management District and /or Bay Area Air Quality Management District, as required.
- Burn permits will be obtained from CAL FIRE and the Monterey Bay Air Quality Management District and/or Bay Area Air Quality Management District, as required.

Coastal Act Compliance

☐ The proposed project is NOT within the Coastal Zone

☒ The proposed project is within the Coastal Zone (*check one of the following boxes*)

☒ A coastal development permit been applied for or obtained from the local Coastal Commission district office or local government with a certified Local Coastal Plan, as applicable

☐ The local Coastal Commission district office or local government with a certified Local Coastal Plan (in consultation with the local Coastal Commission district office) has determined that a coastal development permit is not required

The project is within the Coastal Zone, as defined by the California Coastal Act, and pursuant to SPR AD-9 in the PEIR (CalVTP Final PEIR Volume II, Section 2.7.1, 34). Communication and coordination between the California Coastal Commission (CCC), San Mateo RCD, the County of San Mateo, RCD of Santa Cruz County, the County of Santa Cruz, and similar entities has allowed for the development of Public Works Plans (PWPs) to expedite Coastal Act authorization through the issuance of a Notice of Impending Development, or NOID, which serves as a coastal development permit when found consistent with the PWP, including Coastal Vegetation Treatment Standards (CVTS) (Attachment D). The CCC received a DRAFT Coastal Santa Cruz Mountains: State Parks Forest Health Initiative PSA for their review on May 2, 2025, and met with

the project team to discuss comments on June 5, 2025. Following approval by the CCC, due to the expansive scope and time scale associated with this project, project authorization of initial and maintenance treatments under the San Mateo County Forest Health and Fire Resilience PWP, and the Santa Cruz County Forest Health and Fire Resilience PWP, would be authorized for the full term of the PWP (6 years).

9. **Native American Consultation**. *For treatment projects that are within the scope of the CalVTP PEIR, AB 52 consultation for AB 52 compliance has been completed. The Board of Forestry and Fire Protection conducted consultation pursuant to Public Resources Code section 21080.3.1 during preparation of the PEIR. For treatment projects with impacts not within the scope of the PEIR, pursuant to PRC Sections 21080.3.1, 21080.3.2, and 21082.3, project proponents preparing a new negative declaration, mitigated negative declaration, or EIR must notify any California Native American tribe who has submitted written request for notification of a project in the area of the treatment site. Upon written request for consultation by a tribe, the project proponent must begin consultation before the release of the environmental document and must follow the requirements of the cited PRC sections*.

State Parks maintains a cultural resource inventory, including records from the Northwest Information Center (NWIC) and records prepared by State Parks Santa Cruz District's cultural resources staff. These records were obtained and reviewed on May 22, 2025, consistent with SPR CUL-1. The review of records revealed 16 previously recorded sites within the PSA/Addendum area.

Pursuant to SPR CUL-2, an updated Native American Contact List provided by the Native American Heritage Commission (NAHC) was obtained. On March 18, 2025, Senior State Archaeologist and Tribal Liaison, Michael Grone, PhD, sent notification letters or emails to invite the geographically affiliated tribes indicated on the NAHC list for Santa Cruz and San Mateo counties to consult on the project. One response was received that had no specific comments or requests regarding the project. A NAHC Sacred Lands Database search on March 13, 2025 yielded a positive result.

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DETERMINATION (To be completed by the project proponent)

☒ 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 within the CalVTP treatable landscape is, therefore, WITHIN THE SCOPE of the CalVTP PEIR. For the proposed project areas outside of the CalVTP treatable landscape, no new circumstances have occurred, nor has any new information been identified requiring new analysis or verification. Project changes would not result in any new or substantially more severe significant impacts. NO ADDITIONAL CEQA DOCUMENTATION beyond this PSA and Addendum to the PEIR is required.

☒ I find that treatments in proposed project areas outside the CalVTP treatable landscape do not result in substantial changes in the project, no substantial changes in circumstances have occurred, and no new information of substantial importance has been identified. The inclusion of project areas outside the CalVTP treatable landscape will not result in any new or substantially more severe significant impacts. None of the conditions described in State CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR have occurred; therefore, this ADDENDUM is adopted to address the project areas outside geographic extent presented in the PEIR.

☐ 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:
Chris Spohrer
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Signature

11/18/2025

Date

Chris Spohrer

Printed Name

District Superintendent II

Title

California State Department of Parks and Recreation

Agency

4.0 Project Specific Analysis/Addendum

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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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 REC-1 AQ-2 AQ-3 AD-4	NA	LTS	No	Yes
Impact AES-2: Result in Long-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from WUI Fuel Reduction, Ecological Restoration, or Shaded Fuel Break Treatment Types	LTS	Impact AES-2, pp. 3.2-20 – 3.2-25	Yes	AD-4 REC-1 AES-1 AES-3	NA	LTS	No	Yes
Impact AES-3: Result in Long-Term Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from the Non-Shaded Fuel Break Treatment Type	SU	Impact AES-3, pp. 3.2-25 – 3.2-27	No	NA	None	No Impact	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact AES-1

Initial and maintenance treatments will include manual, mechanical, targeted herbicide application, and prescribed burning treatments under the ecological restoration treatment type. The potential for these treatments to result in short-term, substantial degradation of scenic vista or visual character of the landscape is examined in the PEIR (CalVTP Final PEIR Volume II Section 3.2.3, p. 16-19). The treatment activities and potential impacts are within the scope of the PEIR because they are consistent with the activities and impacts addressed in the PEIR.

The nearest officially designated State Scenic Highway is Highway 1, which runs through the southern portion of the project area in Big Basin Redwoods State Park. Highway 236, which runs through some of the northeastern parcels owned by the Sempervirens Fund, is the nearest eligible, or not officially designated, State Scenic Highway[4].

The project spans portions of Big Basin Redwoods, Año Nuevo, and Butano State Park, which are recreational properties owned by the California Department of Parks and Recreation. The project also spans properties owned by the Sempervirens Fund and Save the Redwoods League, which are not currently managed for public access or recreation. Within the parks there are several public viewpoints along public trails and roads that are within, are in proximity to, or have a view of the proposed treatments. Treatment prescriptions target retention of numerous features, such as well-spaced overstory trees, habitats trees and features for wildlife, and mosaics of chaparral and other understory vegetation. These retention standards will help avoid any substantial visual impacts along public trails and roads or areas with a view of the project area.

To reduce substantial adverse change to scenic vistas or visual character of the landscape in the short-term, the following SPRs are integrated into the project design: provide public notification one to three days prior to the commencement of prescribed burning operations (SPR AD-4), stage equipment and treatment-related materials outside of public viewsheds to the extent feasible (SPR AES-2), submit a smoke management plan in accordance with 17 CCR Section 80160 for burns greater than 10 acres (SPR AQ-2), create a burn plan using California State Parks Prescribed Burn plan template (SPR AQ-3), and provide public notification of temporary closures for recreational users (SPR REC-1).

All of the listed standard project requirements coupled with the project goal of promoting healthy and resilient ecosystem characteristics will make the potential for the project to result in short-term substantial degradation of scenic vista, visual character, or damage to scenic resources temporary and less than significant. This determination is consistent with the PEIR and would not constitute a substantially more sever significant impact than what was covered in the PEIR.

Addendum – Impact AES-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in substantial adverse change to scenic vistas or visual character of the landscape in the short-term is essentially the same within and outside the treatable landscape; therefore, the potential impact to cause substantial adverse change to scenic vistas or visual character of the landscape is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

[4]https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa

Impact AES-2

Initial and maintenance treatments will include manual, mechanical, and prescribed burning treatments under the ecological restoration treatment type. The potential for these treatments to result in long-term degradation of the visual character of the landscape was examined in PEIR (CalVTP Final PEIR Volume II Section 3.2.3, pages 20-22).

As mentioned in Impact AES-1, the project area spans public land within Big Basin Redwoods State Park, Año Nuevo State Park, and Butano State Park, recreational properties managed by the California Department of Parks and Recreation. The project also spans properties owned by the Sempervirens Fund and Save the Redwoods League, which are not currently managed for public access or recreation. Possible public viewpoints of the project area include public trails and roads throughout the parks and the nearby dedicated State Scenic Highways such as Highway 1, which crosses through the southern portion of the project area through Big Basin Redwoods State Park, and an eligible State Scenic Highway, Highway 236, which runs through some of the northeastern parcels owned by the Sempervirens Fund. The project area is densely vegetated with mature trees and understory species along highly variable topography, which could substantially reduce the visibility of treatments from public viewpoints. Additionally, the treatment prescription will result in the retention of overstory trees and various pockets of understory habitat that will promote ecosystem conditions that remain consistent with the current natural, vegetated landscape and would not constitute a substantial adverse change or degrade the visual character of the landscape in the long-term.

To minimize substantial adverse change to scenic vistas or visual character of the landscape in the long-term, the following SPRs are integrated into the project design: provide public notification one to three days prior to the commencement of prescribed burning operations (SPR AD-4), thin and feather adjacent vegetation to break up linear edges during mechanical and manual treatments (SPR AES-1), retain vegetation to screen the edge of treatment areas adjacent to public viewpoints (SPR AES-3), and provide public notification of temporary closures for recreational users (SPR REC-1).

Based on the implementation of SPR AD-4, SPR AES-1, SPR AES-3, and SPR REC-1 and this project's consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Addendum – Impact AES-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in substantial adverse change to scenic vistas or visual character of the landscape in the long-term is essentially the same within and outside the treatable landscape; therefore, the potential impact to cause substantial adverse change to scenic vistas or visual character of the landscape is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact AES-3

This project does not include non-shaded fuel breaks; therefore this impact does not apply; there will be no impact to scenic vistas, visual character, quality of views, or scenic resources as a result of this project.

Addendum – Impact AES-3

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, non-shaded fuel breaks are not included. Therefore, this impact does not apply; there will be no impact to scenic vistas, visual character, quality of views, or scenic resources as a result of this project.

New Aesthetic and Visual Resource Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.2.1 and 3.2.2). No changed circumstances would lead to new significant impacts not addressed in the CalVTP PEIR; no new impact will occur.

Addendum – New Aesthetic and Visual Resource Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR.

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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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]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
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact AG-1

Initial and maintenance treatments will include manual, mechanical, herbicide, and prescribed burning treatments in the tree fuel type, including forest land as defined in California PRC Section 12220(g), to implement the ecological restoration treatment type. The potential for proposed treatments to result in a loss of forested land was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.3.3 page 7-8).

As described in Section 2.0, Project Description, vegetation treatments will target the removal of understory vegetation and trees to increase crown spacing, reduce competition for available resources, and reduce horizontal and vertical fuel connectivity. Manual and mechanical treatments will also focus on removing trees that are dead, dying, or diseased, increasing competition amongst retention trees, or are otherwise inhibiting healthy habitat function for wildlife and sensitive natural communities. The removal of overstory trees will only occur in overly dense stands and will be limited to codominant trees. This project does not propose the removal of trees to the extent that will promote forest conversion or change in land use. Removal of understory vegetation and dense mid-range diameter, codominant, or intermediate Douglas-fir trees will promote beneficial results by improving forest health and vigor and promoting the development of stand characteristics that are more resilient to changing climate and disturbance regimes. Although proposed treatments will alter forest land through vegetation removal, the treatment will not reduce forest land to less than 10% native tree cover of any species.

No SPRs apply to this impact. The potential for the project to result in the loss or conversion of forestland is within the scope of the PEIR because the treatment activities are consistent with those analyzed in the PEIR. This impact will remain less than significant and will not constitute a substantially more severe significant impact than what was covered in the PEIR.

Addendum – Impact AG-1

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing agricultural resources are essentially the same within and outside of the treatable landscape; therefore, the potential for the treatments to directly result in loss of forest land or conversion of forest land to non-forest use is less than significant. This determination is consistent with the PEIR and would not constitute a substantially more sever significant impact than what was covered in the PEIR.

New Agriculture and Forestry Resource Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II, 3.3.1 and 3.3.2). No changed circumstances will lead to new significant impacts not addressed in the CalVTP PEIR; no new impact will occur.

Addendum – New Agriculture and Forestry Resource Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No new impacts related to agriculture and forestry resources will 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	AD-4 AQ-1 AQ-2 AQ-3 AQ-4 AQ-6	AQ-1	PSU	No	Yes
Impact AQ-2: Expose People to Diesel Particulate Matter Emissions and Related Health Risk	LTS	Table 3.4-6; Impact AQ-2 pp. 3.4-33 – 3.4-34; Appendix AQ-1	Yes	AQ-1 HAZ-1 NOI-4 NOI-5	NA	LTS	No	Yes
Impact AQ-3: Expose People to Fugitive Dust Emissions Containing Naturally Occurring Asbestos and Related Health Risk	LTS	Section 3.4.2; Impact AQ-3, pp. 3.4-34 – 3.4-35	Yes	AQ-4 AQ-5 AQ-1	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	Yes	AQ-6 AD-4 AQ-2 AQ-1	NA	PS	No	Yes
Impact AQ-5: Expose People to Objectionable Odors from Diesel Exhaust	LTS	Impact AQ-5, pp. 3.4-37 – 3.4-38	Yes	HAZ-1 NOI-4 NOI-5	NA	LTS	No	Yes
Impact AQ-6: Expose People to Objectionable Odors from Smoke During Prescribed Burning	SU	Section 2.5.2; Impact AQ-6; pp. 3.4-38	Yes	AQ-2 AQ-4 AQ-6 AD-4	NA	PSU	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

The project area is located in both Santa Cruz and San Mateo Counties, which are in the jurisdiction of the Monterey Bay Air Resources District (MBARD) and the Bay Area Air Quality Management District (BAAQMD).

Pursuant to SPR AQ-1, AQ-2, and AQ-3, the project proponent will prepare a smoke management plan and burn plan to MBARD and/or BAAQMD prior to implementing any prescribed burning treatment. The burn plan will include fire behavior modeling and will be implemented by a California State Parks burn boss, or an equivalently qualified individual. An Incident Action Plan, which identifies burn dates, burn hours, weather limitations, specific burn prescriptions, communication plans, medical plans, traffic plans, and other special instructions required by BARD or BAAQMD (SPR AQ-6), will also be prepared by the project proponent for all prescribed burning treatments. The Incident Actions Plans will also identify the contact personnel for MBARD or BAAQMD to coordinate on-site briefings, posting notifications, and weather monitoring during burning.

Impact AQ-1

Use of vehicles, mechanical equipment, and prescribed burning during treatments would results in emissions of criteria pollutants that could exceed CAAQS or 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 Section 3.4.3, pages 26-33). The proposed treatments, treatment equipment, and equipment use duration are consistent with the scope of the PEIR. The proposed treatment activities include mechanical, manual, prescribed burning, and targeted herbicide application.

When feasible, the use of an air curtain burner to process biomass is proposed pursuant to Mitigation Measure GHG-2. Evaluation of criteria air pollutant emissions from this biomass processing technology conducted by Ascent indicates that smoke and criteria air pollutant emissions can be substantially reduced, compared to open pile burning. Relative to pile burning, use of an air curtain burner will substantially reduce reactive organic gas (ROG) and particulate matter (PM) emissions by approximately 96 percent. For nitrous oxide (NOX), air curtains are estimated to reduce NOX emissions by at least 73 percent (Ascent, 2022).

To reduce the generation of criteria air pollutants that would exceed CAAQS and NAAQS thresholds, the following SPRs are integrated into the project design: provide public notifications one to three days prior to the commencement of prescribed burning operations (SPR AD-4), comply with applicable air quality regulations (SPR AQ-1), submit a smoke management plan in accordance with 17 CCR Section 80160 for burns greater than 10 acres (SPR AQ-2), create a burn plan using California State Parks Prescribed Burn Plan template (SPR AQ-3), minimize dust during treatment activities (SPR AQ-4), avoid naturally occurring asbestos (SPR AQ-5), and implement prescribed burn safety procedures (SPR AQ-6). Per SPR AQ-5, there are no areas within the project area that are known to contain naturally occurring asbestos. Additionally, the application of Mitigation Measure AQ-1 to the extent feasible will implement vehicle and equipment emission reduction techniques to reduce the mass of criteria air pollutants and precursors generated during treatment activities. However, as analyzed in the PEIR, Mitigation Measure AQ-1 will not reduce emissions to a less than significant level and the amount of reduction cannot be determined.

Although there is a reduction in the potential for impact related to the generation of criteria air pollutants through the implementation of SPRs AD-4, AQ-1, AQ-2, AQ-3, AQ-4, and AQ-6, Mitigation Measure AQ-1, and through the use of biomass processing techniques, this is impact is still determined to be potentially significant and unavoidable due to uncertainties in quantifying the reduction of emissions. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Addendum – Impact AQ-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the air quality conditions present and air basin in the areas outside the treatable landscape area are essentially the same as those within the treatable landscape; therefore, the potential impact to generate criteria air pollutants and precursors that would exceed CAAQS and NAAQS is also considered potentially significant and unavoidable, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact AQ-2

Use of vehicles and mechanical equipment during initial and maintenance treatments has the potential to expose people, such as hikers, recreationists, and workers to diesel particulate matter emissions and related health risks. The potential to expose people to diesel particulate matter was examined in the PEIR (CalVTP Final PEIR Volume II Sections 3.4.3, page 33-34.

To reduce people's exposure to diesel particulate matter and related health risks, the following SPR's are integrated into the project design: comply with air quality regulations (SPR AQ-1), properly maintain all diesel and gasoline-powered engines (SPR HAZ-1), position treatments and staging areas away from human receptors to the extent feasible (SPR NOI-4), and limit equipment idling time (SPR NOI-5).

Diesel particulate matter emissions from the proposed treatments are within the scope of the PEIR because the exposure potential is the same as analyzed in the PEIR, and the types and amount of equipment that will be used, as well as the duration of use, during proposed treatments are consistent with those analyzed in the PEIR. Based on the implementation of SPR HAZ-1, SPR NOI-4, and SPR NOI-5, this impact will remain less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact AQ-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to expose people to diesel particulate matter is essentially the same within and outside the treatable landscape.

In addition, the proposed revision to SPR HAZ-1 indicates that any leaking equipment may be stabilized and fixed onsite. All other elements of SPR HAZ-1 will remain the same as presented in the PEIR. This revision is consistent with the purpose of SPR HAZ-1 and does not involve any changes to requirements regarding equipment maintenance that could affect diesel particulate emissions. For the reasons described, proposed revisions to SPR HAZ-1 will not result in a substantially more severe significant effect related to emissions of diesel particulate matter than what was covered in the PEIR.

Therefore, the potential impact to result in the exposure of diesel particulate matter is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact AQ-3

Use of vehicles, mechanical equipment, and prescribed burning during treatments would involve ground disturbing activities. The potential to expose people to naturally occurring asbestos-containing fugitive dust emissions was examined in the PEIR.

To reduce exposure to fugitive dust emissions containing naturally occurring asbestos, the following SPRs are integrated into the project design: comply with applicable air quality regulations (SPR AQ-1), minimize dust during treatment activities (SPR AQ-4), and avoid naturally occurring asbestos (SPR AQ-5). Per SPR AQ-5, there are no areas within the project area that are known to contain naturally occurring asbestos (USGS, 2024).

There are no known sites of naturally occurring asbestos (NOA) within the project area, however fibrous amphibole, which indicates geologic environments that may be favorable for asbestos formation, has been reported in Santa Cruz County (Van Gosen, 2011). Furthermore, San Mateo County is reported to contain ultramafic rock or serpentine, which are common host rocks for asbestos (Van Gosen, 2011). The locations identified as having fibrous amphibole in Santa Cruz County and the locations containing ultramafic rock or serpentine in San Mateo County do not overlap with the project area. The nearest reported occurrence of NOA is to the east of the project area in Santa Clara County (Van Gosen, et al, 2011).

Potential NOA exposure from the proposed treatments is within the scope of the activities and impacts addressed in the PEIR because the types of ground-disturbing activities and the exposure potential is consistent with the impacts analyzed in the PEIR. Based on the implementation of SPR AQ-4, SPR AQ-5, the lack of naturally occurring asbestos sites within the project area, and consistency with the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Addendum – Impact AQ-3

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential to expose people to fugitive dust emissions containing naturally occurring asbestos and related health risk is essentially the same within and outside the treatable landscape; therefore, the impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact AQ-4

Prescribed burning in the form of pile and/or broadcast burning during initial and maintenance treatments has the potential to expose people to toxic air contaminants, which was examined in the PEIR. The duration and parameters of prescribed burning are within the scope of activities analyzed in the PEIR and will be consistent with parameters imposed by MBARD and BAAQMD and for those impacts analyzed in the PEIR for Santa Cruz and San Mateo counties. Therefore, the potential for exposure to toxic air contaminants is also within the scope of the PEIR.

When feasible, the use of an air curtain burner to process biomass is proposed to reduce smoke emissions and associated toxic air contaminants (TACs). Evaluation of biomass processing technology conducted by Ascent indicates that TACs, a subset of reactive organic gases (ROGs) due to deriving from organic material can be substantially reduced, compared to open pile burning. Relative to pile burning, use of an air curtain burner will substantially reduce ROG emissions by approximately 96 percent (Ascent, 2022).

To minimize exposure to smoke and reduce smoke emissions, the following SPRs are integrated into the project design: provide public notification one to three days prior to the commencement of prescribed burning operations (SPR AD-4), comply with applicable air quality regulations (SPR AQ-1), submit a smoke management plan in accordance with 17 CCR Section 80160 for burns greater than 10 acres (SPR AQ-2), and implement prescribed burn safety procedures (SPR AQ-6).

All feasible measures to prevent and minimize smoke emissions and minimize exposure to smoke are included in the SPRs. No additional mitigation measures are feasible. As analyzed in the PEIR, this impact was determined to be significant and unavoidable after all feasible mitigation measures due to short-term exposure to TACs that could occur in unpredictable weather during prescribed burns. Based on this project's consistency with the PEIR, this impact will remain potentially significant and unavoidable, as determined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, pages 35-37). This determination would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact AQ-4

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the air quality conditions present, and air basins are essentially the same within and outside the treatable landscape; therefore, the potential to impact air quality is also considered potentially significant and unavoidable, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact AQ-5

The use of vehicles and mechanical equipment during initial and maintenance treatments has the potential to expose people to objectionable odors from diesel exhaust. The potential to expose human receptors to diesel exhaust was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, pages 37-38).

To minimize exposure to objectionable odors from diesel exhaust, the following SPRs are integrated into the project design: comply with air quality regulations (SPR AQ-1), properly maintain all diesel and gasoline-powered equipment (SPR HAZ-1), positions treatments and staging areas away from human receptors to the extent feasible (SPR NOI-4), and limit equipment idling time (SPR NOI-5).

The potential impacts associated with the release of objectionable odors from diesel exhaust during treatments are within the scope of the PEIR because treatment activities are consistent with those analyzed in the PEIR. Based on the implementation of the SPR AQ-1, SPR HAZ-1, SPR NOI-4, and SPR NOI-5 and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact AQ-5

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to expose people to objectionable odors from diesel are essentially the same within and outside the treatable landscape.

In addition, the proposed revision to SPR HAZ-1 indicates that any leaking equipment may be stabilized and fixed onsite. All other elements of SPR HAZ-1 will remain the same as presented in the PEIR. This revision is consistent with the purpose of SPR HAZ-1 and does not involve any changes to requirements regarding equipment maintenance that could affect diesel particulate emissions. For the reasons described, proposed revisions to SPR HAZ-1 will not result in a substantially more severe significant effect related to release of objectionable odors from diesel exhaust during treatments than what was covered in the PEIR.

Therefore, the potential to expose people to objectionable odors from diesel is also considered potentially significant and unavoidable, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact AQ-6

Prescribed burning in the form of pile and broadcast burning during initial and maintenance treatments has the potential to expose people to objectionable odors from smoke, as described in the PEIR (CalVTP Final PEIR Volume II 3.4.3, page 38-39).

To minimize exposure to objectional odors from smoke during prescribed burning treatments, the following SPRs are integrated into the project design: provide public notification one to three days prior to the commencement of prescribed burning operations (SPR AD-4), comply with air quality regulations (SPR AQ-1), submit a smoke management plan in accordance with 17 CCR Section 80160 for burns greater than 10 acres (SPR AQ-2), create a burn plan using California State Parks Prescribed Burn Plan template (SPR AQ-3), and implement prescribed burn safety procedures (SPR AQ-6).

The duration and parameters of the prescribed burn operations and the exposure potential are consistent with the activities analyzed in the PEIR. For this reason, the potential for exposure to objectionable odors from smoke is also within the scope of impacts covered in the PEIR. No additional mitigation measures are feasible, and this impact will remain potentially significant and unavoidable, as explained in the PEIR. Based on the implementation of the applicable SPR AD-4, SPR AQ-1, SPR AQ-2, SPR AQ-3, SPR AQ-6 and consistency with the scope of the PEIR, this impact remains potentially significant and unavoidable, as determined in the PEIR (CalVTP Final PEIR Volume II Section 3.4.3, page 38- 39). This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact AQ-6

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the prescribed burn conditions present and air basins are essentially the same within and outside the treatable landscape; therefore, the potential to expose people to objectional odors from smoke during prescribed burning treatments is also considered potentially significant and unavoidable, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

New Air Quality Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.4.1 and 3.4.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Air Quality Impacts

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

impacts of the proposed treatment project are also consistent with those considered in the PEIR. 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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-7 CUL-8	NA	LTS	No	Yes
Impact CUL-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources or Subsurface Historical Resources	SU	Impact CUL-2, pp. 3.5-15 – 3.5-16	Yes	CUL-1 CUL-2 CUL-3 CUL-4 CUL-5 CUL-8	CUL-2	SU	No	Yes
Impact CUL-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource	LTS	Impact CUL-3, p. 3.5-17	Yes	CUL-1 CUL-2 CUL-3 CUL-4 CUL-5 CUL-6 CUL-8	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]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

State Parks maintains a cultural resource inventory, including records from the Northwest Information Center (NWIC) and records prepared by the State Parks Santa Cruz District's cultural resources staff. A records search of the entire project area was obtained and reviewed on May 22nd, 2025, consistent with SPR CUL-1. The review of records revealed 16 previously recorded sites within the PSA/Addendum area.

Pursuant to SPR CUL-2, an updated Native American Contact list provided by the Native American Heritage Commission (NAHC) was obtained. On March 13th, 2025, Senior State Archaeologist and Tribal Liaison, Michael Grone, PhD, sent notification letters or emails to invite geographically affiliated tribes

indicated on the NAHC list for Santa Cruz and San Mateo counties to consult on the project. One response was received that stated there were no comments or concerns. A NAHC Sacred Lands Database search on March 13th, 2025, yielded positive results.

Impact CUL-1

Initial and maintenance treatments, including manual, mechanical, and prescribed burning, have the potential to damage historical resources. The records search did yield built historical resources within the project area.. The potential for these treatments to cause a substantial adverse change in significance to built historical resources was analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, pages 14-15).

The potential to cause disturbance to, damage to, or destruction of built-environment structures during implementation of treatment activities is within the scope of the PEIR because the treatment activities and levels of disturbance are consistent with those addressed in the PEIR. This impact is within the scope of the PEIR because the intensity of ground disturbance of the treatment project is consistent with that analyzed in the PEIR.

To minimize substantial adverse change to known and unrecorded resources, the following SPRs are integrated into the project design: an archaeological and historical resource records search was conducted (SPR CUL-1), identified built historic resources will be avoided with a 100 foot buffer for mechanical and prescribed burning treatments, unless consultation and receipt of written approval from a qualified archaeologist allows a reduced buffer (SPR CUL-7), and all crew members and contractors implementing treatment activities will be trained on the protection of sensitive archaeological, historical, and tribal resources and avoidance measures for encountered or discovered archaeological resources (SPR CUL-8).

Based on the implementation of the SPR CUL-1, SPR CUL-7, SPR CUL-8, and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

PSA Addendum – Impact CUL-1

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, the potential to encounter built-environmental structures that have not yet been evaluated for historical significance in areas outside of the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact to historical resources outside of the treatable landscape within the PSA/Addendum area is also less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact CUL-2

Initial and maintenance treatments involving the use of heavy equipment (e.g., mechanical treatment activities) that may turn up soils due to shallow ground disturbance, have the potential to cause a substantial adverse change in the significance of unique archaeological resources and subsurface historical resources. The potential for soil disturbance during mechanical treatments may result in damage to known or previously unknown unique archaeological resources or subsurface historical resources, as described in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, pages 15-16).

Pursuant to SPR CUL-1, a record search returned several previously recorded unique archaeological resources or subsurface historical resources; additionally, the project area has the potential to contain

unique or subsurface archaeological resources that have not been previously recorded or evaluated for significance.

The potential for these treatment activities to result in an inadvertent discovery and subsequent damage of unique archaeological resources or subsurface historical resources during vegetation treatment was examined in the PEIR. This impact was identified as significant and unavoidable in the PEIR because of the large geographic extent of the treatable landscape and the possibility that there could be inadvertent damage of unknown resources in some instances.

To reduce substantial damage of known and unrecorded resources, the following SPRs are integrated into the project design: an archaeological and historical resource records search was conducted (SPR CUL-1), all geographically affiliated Native American tribes were contacted, notified of treatment activities, and invited to consult on the project (SPR CUL-2), pre-field research will be conducted prior to treatment activities (SPR CUL-3), a survey will be conducted prior to treatment, including the completion of a survey report (SPR CUL-4), any identified archaeological sites will be avoided or treated with compliance to the development of protection measures (SPR CUL-5), and all crew members and contractors will be trained prior to treatment activities (SPR CUL-8). Additionally, Mitigation Measure CUL-2 requires that if a prehistoric or historic-era subsurface archaeological feature or deposit is discovered, all ground disturbing activities within 100 feet of the resource will be halted, and every reasonable effort to identify and protect the resource would be applied.

Due to this project occurring in the Coastal Zone of Santa Cruz County and being subject to the requirements of the Santa Cruz PWP, Project Standard 4 of the PWP shall apply to this Mitigation Measure. In alignment with Section 16.40.040 (A)(1) of the County LCP, a 200-foot no-disturbance buffer will be applied if any previously undiscovered human remains, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age; this modification will apply to portions of the project area that overlap with the Coastal Zone in Santa Cruz County.

The implementation of SPRs CUL-1 through CUL-5, SPR CUL-8, and Mitigation Measure CUL-2 reduces impacts to inadvertent discoveries, however, because this project could result inadvertent discovery and subsequent damage of unique archaeological resources or subsurface historical resources, it would contribute to the environmental significance conclusion in the PEIR; therefore, this impact remains potentially significant and unavoidable, as determined in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, page 16).

Addendum – Impact CUL-2

As described under Section 1.2.3 Proposed Project Revisions, State Parks proposes to revise SPR CUL-4. However, the proposed revisions to SPR CUL-4 apply only to non-ground disturbing (e.g., manual and targeted herbicide treatments) activities, which does not apply to this impact. For the purpose of this impact analysis, a survey of the treatment area will be completed prior to ground disturbing (e.g., mechanical) or prescribed fire activities, pursuant to SPR CUL-4.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for discovery of archaeological resources is essentially the same within and outside the treatable landscape; therefore, the potential impact to unique archaeological resources or subsurface historical resources is also considered potentially significant and unavoidable, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact CUL-3

Initial and maintenance treatments, including manual, mechanical, prescribed burning, and targeted herbicide application, have the potential to inadvertently damage or destroy tribal cultural resources that may be present within treatment areas.

Pursuant to SPR CUL-2, on March 18th, 2025 all geographically affiliated Native American tribes were contacted, notified of treatment activities, and invited to consult on the project by Senior State Archaeologist and Tribal Liaison, Michael Grone, PhD. One response was received, which stated there were no comments or concerns.

The potential for the initial and maintenance treatment activities to cause a substantial adverse change in the significance of a tribal cultural resource was examined in the PEIR. As evaluated in the PEIR, implementation of SPRs would avoid any substantial adverse change to cultural resources identified within the treatment project. The potential for significant impacts to tribal resources during implementation of the proposed treatment project is within the scope of the PEIR because the activities, impacts, and intensity of ground disturbing activities are consistent with those analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, page 17).

To minimize substantial adverse change to tribal cultural resources, the following SPRs are integrated into the project design: an archaeological and historical resource records search was conducted (SPR CUL-1), all geographically affiliated Native American tribes were contacted, notified of treatment activities, and invited to consult on the project (SPR CUL-2), pre-field research will be conducted prior to treatment activities (SPR CUL-3), a survey will be conducted prior to treatment, including the completion of a survey report (SPR CUL-4), any identified archaeological sites will be avoided or treated with compliance to the development of protection measures (SPR CUL-5), effective protection measures for important tribal cultural resources will be developed (SPR CUL-6), and as all crew members and contractors will be trained prior to treatment activities (SPR CUL-8).

Based on the implementation of SPR CUL-1 through CUL-6 and SPR CUL-8 and this project's consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Addendum – Impact CUL-3

As described under Section 1.2.3 Proposed Project Revisions, State Parks proposes to revise SPR CUL-4. However, the proposed revisions to SPR CUL-4 apply only to non-ground disturbing (e.g., manual and targeted herbicide application) activities, which does not apply to this impact. For the purpose of this impact analysis, a survey of the treatment area will be completed prior to ground disturbing (e.g., mechanical) activities or prescribed fire treatments, pursuant to SPR CUL-4.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for discovery of archaeological resources is essentially the same within and outside the treatable landscape; therefore, the potential impact to cause substantial adverse change to tribal cultural resources is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact CUL-4

Initial and maintenance treatments include the use of heavy equipment, which may disturb soils, thereby increasing the potential to uncover and disturb human remains if present within a treatment area.

Pursuant to SPR CUL-1, record search did return a burial or site containing human remains within the project area. Furthermore, the project area has the potential to contain additional burials or sites that contain human remains that have not been recorded or evaluated for historical significance.

The potential for treatment activities to disturb human remains was examined the PEIR. This impact is within the scope of the PEIR because the intensity of ground disturbance is consistent with those analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, page 18). Per the PEIR, the project would comply with California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 in the event that human remains are discovered. No SPRs are applicable to this impact. Based on the compliance with the California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 and consistency with the scope of the PEIR, this impact remains less than significant.

Addendum – Impact CUL-4

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, the potential to uncover and disturb human remains during implementation of the treatment project is essentially the same within and outside the treatable landscape and treatment activities; therefore, the impact related to disturbance of human remains is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Archaeological, Historical, and Tribal Cultural Resource Impacts

The proposed treatment is consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the PEIR (CalVTP Final PEIR Volume II Section 3.5.1 and 3.5.2). For the reasons described above, impacts of the proposed treatment project are consistent with those covered in the Program EIR. No changed circumstances are present. Therefore, no new impact related to archaeological, historical, or tribal cultural resources would occur that is not covered in the PEIR.

PSA Addendum – New Archaeological, Historical, and Tribal Cultural Resource Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	LTS	Impact BIO-1, pp 3.6-131–3.6.138	Yes	AQ-3 AQ-4 BIO-1 BIO-2 BIO-7 BIO-9 GEO-1 GEO-3 GEO-4 GEO-5 GEO-7 HYD-5	BIO-1a BIO-1b BIO-1b	LTSM	No	Yes
Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications	LTS (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-3 BIO-4 BIO-5 BIO-8 BIO-10 HAZ-5 HAZ-6 HYD-4 HYD-5	BIO-2a BIO-2b BIO-2c BIO-2d BIO-2e BIO-2f BIO-2g BIO-3a BIO-3b BIO-3c BIO-4	LTSM (all wildlife species except bumble bees) S&U (bumble bees)	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	LTS	Impact BIO-3, pp 3.6-186–3.6-191	Yes	BIO-1 BIO-2 BIO-3 BIO-4 BIO-5 BIO-6 BIO-8 BIO-9 HYD-4 HYD-5	BIO-3a BIO-3b BIO-3c	LTS	No	Yes
Impact BIO-4: Substantially Affect State or Federally Protected Wetlands	LTS	Impact BIO-4, pp 3.6-191–3.6-192	Yes	BIO-1 HYD-1 HYD-4	BIO-4	LTSM	No	Yes
Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries	LTS	Impact BIO-5, pp 3.6-192–3.6-196	Yes	BIO-1 BIO-4 BIO-5 BIO-10	BIO-5	LTSM	No	Yes

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

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Pursuant to SPR BIO-1, a data review of project-specific biological resources, including habitat and vegetation types, special-status plants, special status wildlife, and sensitive habitats (e.g., sensitive natural communities, wetlands) with potential to occur in the treatment areas was conducted.

The California Natural Diversity Data Base (CNDDB), Biogeographic Information and Observation System (BIOS) 6, was used to identify the state and federally listed species that may be present within the 12 United States Geological Survey (USGS) 7.5' Quadrangles that surround the project area. The search yielded 99 federal and state threatened, endangered, or candidate species, CDFW species of special concern and candidate species, and the California Native Plant Society's (CNPS) California Rare Plant Rank (CRPR) List 1 and 2 (CNDDB, 2025; CNPS, 2025).

The special-status botanical species known to occur within the project area are analyzed in Impact BIO-1. Similarly, the special-status wildlife species known to occur within the project area are analyzed in Impact BIO-2. Table 5 and Table 6 below compile data pursuant to SPR BIO-1 and include all special-status botanical or wildlife species, respectively, that are known to occur, may occur, or are unlikely to occur

within the project area. Additionally, Attachment D provides the scientific names, legal status, habitat descriptions, species photographs, and the proximity or potential occurrence within the project area for all 99 species to aid in biological resource awareness training and biological surveys.

Habitat and vegetation types in the project area were identified using the Santa Cruz and Santa Clara Fine Scale Vegetation Map Layer File and the San Mateo Fine Scale Vegetation Map Feature Service[5] (Tukman Geospatial and Aerial Information Systems, 2023). The fine scale vegetation data sets were used in combination with the Manual of California Vegetation and the CalVTP Final PEIR Table 3.6-3 to identify vegetation and habitat types known or with potential to occur within the Central California Coast ecoregion and their associated California Wildlife Habitat Relationship (CWHR) types that may be present within or in proximity to the project area (Sawyer et al., 2009 and CalVTP Final PEIR Volume II Section 3.6.1 , Table 3.6-3, pages 25-27). A list of vegetation types and sensitive natural communities with their associated CWHRs is identified in Table 7 below.

Additionally, noticing for the CalVTP process was met by submitting a project description, species status list, and pertinent maps to the CDFW and the United States Fish and Wildlife Service (USFWS) during the planning phase of this project on May 9, 2025. No comments were received from CDFW or USFWS by the end of the 30-day comment window on June 8, 2025.

[5] Online GIS datasets are accessible for the *San Mateo County Fine Scale Vegetation Mapping Data* and *Santa Cruz County Fine Scale Vegetation Mapping Data.*

Table 5. Special-Status Botanical Species with Potential to Occur Within the Project Area

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	**Common Name**						
Agrostis blasdalei	Blasdale's bent grass	Monocots	--	--	1B.2	Coastal dunes, coast bluff scrub, coastal prairie, sandy or gravelly soils, 0-1608 ft elevation, blooms May-July	*May occur*. The project area contains potentially suitable habitat for this species
Amsinckia lunaris	bent-flowered fiddleneck	Dicots	--	--	1B.2	Grows in opening on gravelly slopes of serpentine soils, favors valley grassland and foothill woodland communities. 0-2625 ft elevation	*May occur*. The project area may contain potentially suitable habitat
Aphyllon robbinsii	Robbins' broomrape	Dicots	--	--	1B.1	Grows in sandy or loose soils of coastal bluffs typically below 328 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species
Arctostaphylos andersonii	Anderson's manzanita	Dicots	--	--	1B.2	Grows in openings in redwood forests or near forest edges. Favors hot areas in broadleaved upland forests, chaparral communities, and North coast coniferous forests. 0-2300 ft elevation	*Know to occur*.
Arctostaphylos glutinosa	Schreiber's manzanita	Dicots	--	--	1B.2	Siliceous shale outcrops, chaparral, and knobcone-pine woodlands, 590-2133 ft elevation	*May occur*. The project area may contain suitable habitat for this species

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
Arctostaphylos ohloneana	Ohlone manzanita	Dicots	--	--	1B.1	Siliceous shale outcrops, chaparral, knobcone-pine woodlands, 1475-1740 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species
Arctostaphylos regismontana	Kings Mountain manzanita	Dicots	--	--	1B.2	Openings on granite or sandstone outcrops with fast-draining soils. Favors full sun, low moisture habitats in chaparral, broadleaf, or coniferous forests, 787-2313 ft elevation	*May occur*. The project area may contain potentially suitable habitat for this species
Arctostaphylos silvicola	Bonny Doon manzanita	Dicots	--	--	1B.2	Weathered sandstone soils in chaparral and conifer forests, 0-1969 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Arenaria paludicola	marsh sandwort	Dicots	E	E	1B.1	Marshes, swamps, saturated bog soils and sandy substrates	*May occur*. The project area may contain potentially suitable habitat for this species
Astragalus agnicidus	Humboldt County milk-vetch	Dicots	--	E	1B.1	Early successional species, commonly found on ridgetops after logging	*May occur.* The project area may contain potentially suitable habitat for this species.
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	Dicots	--	--	1B.2	Coastal marshes, seeps, 0-492 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
Calyptridium parryi var. hesseae	Santa Cruz Mountains pussypaws	Dicots	--	--	1B.1	Sandy soils in chaparral, oak woodland, and conifer forests, 1967-3445 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Carex comosa	bristly sedge	Monocots	--	--	2B.1	Wet areas less than 1312 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Carex saliniformis	deceiving sedge	Monocots	--	--	1B.2	Marshes, pond shores, wet openings in open habitats or openings in forested habitats. Less than 820 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Chorizanthe pungens var. hartwegiana	Ben Lomond spineflower	Dicots	E	--	1B.1	Sandhill chaparral communities and lower montane conifer forests, grows in marine sand deposits	*May occur.* The project area may contain potentially suitable habitat for this species.
Chorizanthe robusta var. hartwegii	Scotts Valley spineflower	Dicots	E	--	1B.1	Sedimentary deposits of sandstone and mudstone	*May occur.* The project area may contain potentially suitable habitat for this species.
Chorizanthe robusta var. robusta	robust spineflower	Dicots	E	--	1B.1	Found on inland or coastal on marine sand deposits and sandstone outcrops	*May occur.* The project area may contain potentially suitable habitat for this species.
Cirsium andrewsii	Franciscan thistle	Dicots	--	--	1B.2	Coastal bluff scrub, broadleaved upland forest, coastal scrub.	*May occur.* The project area may contain potentially

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
						Below 492 ft in elevation	suitable habitat for this species.
Collinsia multicolor	San Francisco collinsia	Dicots	--	--	1B.2	Closed-cone pine forest, and moist, shady scrub less than 984 ft elevation	*Known to occur.* This species has known occurrence within the project area off State Highway 1, along Canyon road.
Dacryophyllum falcifolium	tear drop moss	Bryophytes	--	--	1B.3	North coast coniferous forest, 165-900 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Eastwoodiella californica	swamp harebell	Dicots	--	--	1B.2	Bogs, closed-cone coniferous forest, coastal prairie, meadows, marshes, 5-1330 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Eriogonum nudum var. decurrens	Ben Lomond buckwheat	Dicots	--	--	1B.1	Endemic to Santa Cruz sandhills, 295-656 ft elevation. Blooms June-October	*May occur.* The project area may contain potentially suitable habitat for this species.
Eriophyllum latilobum	San Mateo woolly sunflower	Dicots	E	E	1B.1	Oak woodlands, coastal scrub, lower montane coniferous forest, 148-1083 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Erysimum ammophilum	sand-loving wallflower	Dicots	--	--	1B.2	Chaparrall, coastal dunes, coastal scrub, below 197 ft in elevation	*May occur.* The project area may contain potentially suitable habitat for this species.

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
Erysimum teretifolium	Santa Cruz wallflower	Dicots	E	E	1B.1	Endemic to Santa Cruz sandhills, grows in well-spaced areas of disturbed soils	*May occur.* The project area may contain potentially suitable habitat for this species.
Fissidens pauperculus	minute pocket moss	Bryophytes	--	--	1B.2	Redwood forests, north coast coniferous forests, bare damp soil banks, 33-3360 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Fritillaria liliacea	fragrant fritillary	Monocots	--	--	1B.2	Coastal prairie, valley grasslands, cismontane woodland, often on serpentine or clay soils, 10-1312 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Grimmia torenii	Toren's grimmia	Bryophytes	--	--	1B.3	Rocky openings within chaparral, cismontane woodland, and lower montane coniferous forest communities, 1066-3806 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Grimmia vaginulata	vaginulate grimmia	Bryophytes	--	--	1B.1	Favors limestone, rocky openings, boulder and rock walls, 2247-3724 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Dicots	--	--	1B.2	Primarily inhabits coastal bluffs, terraces, and dunes lower than 328 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
Hesperocyparis abramsiana var. abramsiana	Santa Cruz cypress	Gymnosperms	T	E	1B.2	Sandy or gravelly, low-nutrient soils generally derived from sandstone or granite in chaparral or knobcone pine forest surrounded by coastal redwood	*May occur.* The project area may contain potentially suitable habitat for this species.
Hoita strobilina	Loma Prieta hoita	Dicots	--	--	1B.1	Chaparral and oak woodlands less than 1969 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Horkelia cuneata var. sericea	Kellogg's horkelia	Dicots	--	--	1B.1	Coastal scrub, coastal sage scrub, closed-cone pine forest, dunes, and sandhills, less than 656 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Horkelia marinensis	Point Reyes horkelia	Dicots	--	--	1B.2	Coastal scrub and coastal prairie, less than 656 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Lasthenia californica ssp. macrantha	perennial goldfields	Dicots	--	--	1B.2	Dunes and grasslands immediately along the coast, less than 1640 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Legenere limosa	legenere	Dicots	--	--	1B.1	Wet areas, vernal pools, and ponds less than 3117 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
Leptosiphon rosaceus	rose leptosiphon	Dicots	--	--	1B.1	Open, grassy slopes and coastal bluffs less than 330 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Limnanthes douglasii ssp. sulphurea	Point Reyes meadowfoam	Dicots	--	E	1B.2	Favors full-sun locations within wetland and coastal prairie communities on the edges of meadows, freshwater-marshes, and vernal pools, below 3300 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Malacothamnus arcuatus var. arcuatus	arcuate bushmallow	Dicots	--	--	1B.2	Chaparral and cismontane woodland communities, favors early-successional or post-burn slopes, 3-2411 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Microseris paludosa	marsh microseris	Dicots	--	--	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland, 16-984 ft in elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Monardella sinuata ssp. nigrescens	northern curly-leaved monardella	Dicots	--	--	1B.2	Chaparral, coastal dunes, coastal scrub, lower montane coniferous forests, less than 985 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Monolopia gracilens	woodland woollythreads	Dicots	--	--	1B.2	Openings in broad-leafed upland forest, chaparral, cismontane	*May occur.* The project area may contain potentially

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
						woodland, north coast coniferous forest, valley and foothill grasslands, 330-3935 ft elevation	suitable habitat for this species.
Orthotrichum kellmanii	Kellman's bristle moss	Bryophytes	--	--	1B.2	Chaparral, cismontane woodland, sandstone outcrops, 1125-2247 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Pedicularis dudleyi	Dudley's lousewort	Dicots	--	R	1B.2	Chaparral, cismontane woodlands, north coast coniferous forests, and valley or foothill grasslands usually under 2952 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Penstemon rattanii var. kleei	Santa Cruz Mountains beardtongue	Dicots	--	--	1B.2	Closed-cone pine forest, chaparral, and oak woodland, typically after disturbance, 80-605 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Pentachaeta bellidiflora	white-rayed pentachaeta	Dicots	E	E	1B.1	Serpentine soil grasslands, 120-2000 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Pinus radiata	Monterey pine	Gymnosperms	--	--	1B.1	Limited to a few native stands on the California central coast, typically closed-cone-pine forests or oak woodlands, 80-605 ft elevation	*Known to occur.* This species has an occurrence recorded in the southwestern portion of the project area adjacent to Canyon Road and Last Chance Road.

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
Piperia candida	white-flowered rein orchid	Monocots	--	--	1B.2	Conifers forests within coastal mountain ranges, 148-5299 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Plagiobothrys chorisianus var. chorisianus	Choris' popcornflower	Dicots	--	--	1B.2	Moist, grassy areas in wetlands or ephemeral drainages. Favors coastal prairie, chaparral, northern coastal scrub, and wetland-riparian communities, 49-525 ft elevation	*Known to occur.* This species has an occurrence recorded in the northwestern portion of project area along Cloverdale Road adjacent to Old Woman's Creek.
Plagiobothrys diffusus	San Francisco popcornflower	Dicots	--	E	1B.1	Sparsely vegetated coastal prairies, valleys, and foothill grasslands	*May occur.* The project area may contain potentially suitable habitat for this species.
Polygonum hickmanii	Scotts Valley polygonum	Dicots	E	E	1B.1	Coastal prairies on mudstone and sandstone	*May occur.* The project area may contain potentially suitable habitat for this species.
Rosa pinetorum	pine rose	Dicots	--	--	1B.2	Closed-cone coniferous forest and cismontane woodland, 5-3100 ft elevation	*Known to occur.* This species has an occurrence recorded in the southwestern portion of project area along State Highway 1 adjacent to Theodore J.

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	Common Name						
							Hoover Natural Preserve.
Senecio aphanactis	chaparral ragwort	Dicots	--	--	2B.2	Chaparral, cismontane woodland, and coastal scrub, 50-2625 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Silene scouleri ssp. scouleri	Scouler's catchfly	Dicots	--	--	2B.2	Rocky slopes, coastal bluffs, and foothill grassland communities below 1968 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Silene verecunda ssp. verecunda	San Francisco campion	Dicots	--	--	1B.2	Rocky outcrops of coastal bluff scrub, chaparral coastal prairie, coastal scrub, 100-2115 ft elevation	*Known to occur.* This species has an occurrence recorded in the southwestern portion of the project area adjacent to State Highway 1 and Skyline-To-The-Sea Trail Road.
Stebbinsoseris decipiens	Santa Cruz microseris	Dicots	--	--	1B.2	Favors open areas in loose or disturbed soils, within coastal scrub, broadleafed upland forest, closed-cone pine forest, mixed evergreen forest, chaparral, and coastal prairies, 33-1640 ft elevation	*Known to occur.* This species has an occurrence recorded in the southwestern portion of the project area along the Skyline-To-The-Sea Trail adjacent to Pumphouse Bridge Road.

Botanical Species		Taxon Group	Federal Listing	State Listing	CRPR	Habitat	Potential for Occurrence
Scientific Name	**Common Name**						
Stuckenia filiformis ssp. alpina	northern slender pondweed	Monocots	--	--	2B.2	Marshes, swamps, clear water of lakes and drainage channels, 984-7054 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Trifolium buckwestiorum	Santa Cruz clover	Dicots	--	--	1B.1	Broad-leafed upland forest, cismontane woodland, and coastal prairie, 115-2000 ft elevation	*May occur.* The project area may contain potentially suitable habitat for this species.
Trifolium polyodon	Pacific Grove clover	Dicots	--	R	1B.1	Coastal prairie, wet meadows, closed cone pine forests, and riparian areas	*May occur.* The project area may contain potentially suitable habitat for this species.

State and Federal Listings
- E – Endangered
- R – Rare
- T – Threatened

CRPR Listings
- 1B – Plant species rare or endangered in California and elsewhere (Not protected under ESA or CESA)
- 2B – Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA).
- 0.1 – Seriously threatened in California (over 80% of occurrences are threatened; high degree and immediacy of threat)
- 0.2 – Moderately threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)

Table 6: Special-Status Wildlife Species with Potential to Occur Within the Project Area

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	**Common Name**						
Accipiter cooperii	Cooper's hawk	Birds	--	--	WL	Associated with deciduous and mixed forests and open woodland habitats such as riparian woodlands, semiarid woodlands, and other areas where the woodlands occur in patches. Breeding begins in March with females laying 4-5 eggs with young remaining in the nest for up to 8 weeks.	*May occur.* The project area may contain potentially suitable habitat for this species.
Actinemys marmorata	northwestern pond turtle	Reptiles	PT	--	SSC	This species is aquatic, its habitat includes streams, ponds, lakes, permanent and ephemeral wetlands. They require terrestrial habitat adjacent to these locations for nesting.	*Known to occur.* The species is known to occur in the project area, which contains suitable habitat for this species.
Agelaius tricolor	tricolored blackbird	Birds	--	T	SSC	Found in areas near water, such as marches, grasslands, and wetlands. They require substrate nearby to build nests, often in the form of aquatic vegetation. They also need foraging areas, such as grassland or agricultural pastures.	*May occur*. The project area may contain potentially suitable habitat for this species.
Ambystoma californiense pop. 1	California tiger salamander - central California DPS	Amphibians	T	T	WL	This species uses both upland habitat and aquatic areas. They require ponds, vernal pools, or other bodies of water that hold water for 12 weeks to support larvae development. They inhabit animal burrows and underground hideaways for protection during nonbreeding periods.	*Unlikely to occur.* The project area is unlikely to support this species as it is only found in an area in the far southern portion of Santa Cruz County.

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	**Common Name**						
Aneides niger	Santa Cruz black salamander	Amphibians	--	--	SSC	Occurs in mixed deciduous woodland, coniferous forests, and coastal grasslands. Can be found in riparian areas near streams and under damp debris.	*Known to occur.* This species has occurrences recorded along Waddell Creek and Skyline-To-the-Sea Trail in the southern portion of the project area, along Gazos Creek Road and Gazos Creek, adjacent to Berry Creek in the easter portion of the project area, and adjacent to Cloverdale Road and Old Womans Creek in the northwestern portion of the project area.
Antrozous pallidus	pallid bat	Mammals	--	--	SSC	Favors rocky outcrops in semi-arid climates within grasslands, chaparral, oak woodlands, and coniferous forests. Their diet consist of ground-dwelling prey like small mammals or reptiles and large flying or ground-dwelling insects.	*May occur.* The project area may contain potentially suitable habitat for this species.
Asio otus	long-eared owl	Birds	--	--	SSC	Inhabits open woodlands, forest edges, riparian strips along rivers, wooded ravines and gullies. Their breeding habitat must include thickly wooded areas for nesting and roosting with nearby open spaces for hunting.	*May occur.* The project area may contain potentially suitable habitat for the species.

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	**Common Name**						
Athene cunicularia	burrowing owl	Birds	--	CE	SSC	Nests in underground burrows, and live in wide-open, sparsely vegetated areas like prairies, deserts, grasslands, and agricultural fields. They spend most of their time low to the ground, walking, running, flying low or perched on mounds, bushes, and fenceposts.	*May occur.* The project area may contain potentially suitable habitat for this species.
Bombus occidentalis	western bumble bee	Insects	--	CE	--	This is a pollinator species associated with a wide range of flowering plants and crops within open coniferous, deciduous, and mixed-woodland forests, wet and dry meadows. Capable of foraging in cold, rainy weather conditions and commonly nests underground.	*Known to occur.* This species has a known occurrence recorded within Big Basin Redwoods State Parks adjacent to Hihn Hammond Road.
Brachyramphus marmoratus	marbled murrelet	Birds	T	E	--	This species favors nesting sites in old-growth coniferous forests or rocky talus slopes near the Pacific Ocean, up to approximately 15 miles inland. Nests on large branches approximately 4 inches in diameter or larger that create a platform that may be screened form predators or wind by branches of nearby trees, where the female will lay one yellow, olive, or blue-green egg with brown, black, and lavender specks. This seabird forages in coastal marine habitats, dieting on primarily fish and crustaceans.	*Known to Occur*. This species has occurrences recorded near various drainages throughout the project area, including Gazos Creek, Whitehouse Creek, Berry Creek, Cascade Creek, and West Waddell Creek.
Charadrius nivosus nivosus	western snowy plover	Birds	T	--	SSC	This species nests along seashores, peninsulas, offshore islands, bays, estuaries, and rivers.	*Known to occur.* This species has an occurrence recorded in the southwestern

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	Common Name						
							portion of the project area adjacent to State Highway 1 and Waddell Creek. However, it would only be found on the coastal side of Highway 1.
Cicindela ohlone	Ohlone tiger beetle	Insects	E	--		The Ohlone tiger beetles are only found in grassland habitats throughout coastal terrace prairie. These plant communities are characterized by purple needlegrass and California oatgrass. These coastal prairies are also characterized by shallow soils that become hard in the dry season and soften during the wet season. Adult beetles' bury larva in unvegetated areas on the edges or near grasslands for thermoregulation.	*Unlikely to occur.* This species is limited to Watsonville loam, which is not found in the project area.
Corynorhinus townsendii	Townsend's big-eared bat	Mammals	--	--	SSC	Favors dense coniferous forests, native prairies, and coastal communities usually below 10,800 ft in elevation. Prefers dark, open caves or cliff in cold areas for roosting and does not roost in rock crevices. The primary food source for this species is moths, however, beetles are other small insects are also common.	*May occur.* The project area may contain potentially suitable habitat for this species.

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	**Common Name**						
Coturnicops noveboracensis	yellow rail	Birds	--	--	SSC	This species breeds in sedge or grass-dominated wetlands, specifically wet prairies with narrow-leaves sedges and wet meadows with optimal water depths from 1-10 inches deep.	*May occur.* The project area may contain potentially suitable habitat for this species.
Cypseloides niger	black swift	Birds	--	--	SSC	Nests on cliff ledges and behind waterfalls in areas inaccessible to predators. Forages over forests and open areas.	*Known to occur.* This species has an occurrence recorded along Berry Creek adjacent to west Waddell Creek State Wilderness.
Danaus plexippus plexippus pop. 1	monarch - California overwintering population	Insects	C	--	--	As caterpillars, monarchs are heavily reliable on milkweed as it obligates larval host plant. Milkweed provides toxins to protect them from predation. As adults, monarchs feed on nectar from a variety of flowers. Monarchs overwinter in tree species that include gum, pine, cypress, and sycamore.	*May occur.* The project area may contain potentially suitable habitat for this species.
Dicamptodon ensatus	California giant salamander	Amphibians	--	--	SSC	The California giant salamander requires habitat with cover for hiding, sun protection, and breeding and can be found under rocks, logs, or stones. This species' aquatic habitat consists of lakes, ponds, rivers, streams, or fast-moving water. Females deposit 85-200 eggs underwater and protect the eggs until they hatch. This species has a relatively slow reproduction rate due to long gestation period and they do not	*Known to occur.* This species has occurrences recorded along Skyline-To-The-Sea Trail and Waddell Creek, and along Gazos Creek Road and Gazos Creek.

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	Common Name						
						reach sexual maturity until they are 5-6 years old.	
Elanus leucurus	white-tailed kite	Birds	--	--	FP	Inhabits grasslands, marshes, orchards, river valleys, and woodlands. They typically nest in woodlands near hunting ground for small mammals and rodents.	*May occur.* The project area may contain potentially suitable habitat for this species.
Eucyclogobius newberryi	tidewater goby	Fish	E	--	SSC	Tidewater gobies reside in lagoons, estuaries, marshes, and freshwater tributaries. Within these aquatic environments, water is shallow but not stagnant. Although these waters are commonly brackish, gobies are mobile navigating upstream into freshwater or downstream into waters with higher salinity (up to 28 parts per thousand). Tidewater gobies are commonly found in water that is less than 12 parts per thousand.	*Known to occur.* This species is known to occur in the Waddell Creek Lagoon.
Euphilotes enoptes smithi	Smith's blue butterfly	Insects	E	--		Smith's blue butterfly is found in scattered populations in coastal dune, coastal scrub, chaparral, and grassland habitats. These habitats are associated with two plants that their entire lives are focused around, coast buckwheat and the Seacliff buckwheat. Adults consume the nectar of these plants then lay their eggs on the flowers. Historically, their ranges are from	*May occur.* The project area may contain potentially suitable habitat for this species.

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	Common Name						
						Monterey Bay south through Big Sur to the Point Gorda area.	
Geothlypis trichas sinuosa	saltmarsh common yellowthroat	Birds	--	--	SSC	This species prefers herbaceous wetland and salt marsh communities usually below 1500 feet in elevation. Small, cup-shaped nests are usually well-hidden by tall vegetation less than approximately 1 meter above ground. Females will lay 3-6 white eggs with dark spots on one end of the egg. This species primarily consumes insects like spiders and caterpillars.	*May occur.* The project area may contain potentially suitable habitat for this species.
Laterallus jamaicensis coturniculus	California black rail	Birds	--	T	FP	The habitat of the California black rail consists of salt and fresh water tidal marshes, coastal prairies, and impounded wetlands. It is common to see these areas with a dense cover of pickleweed, bulrushes, cattails, and salt grass. The California black rail utilizes the areas below the vegetation for foraging and movement. It is to note that the water is quite shallow throughout these areas about 1.2 in (3 cm) deep.	*May occur.* The project area may contain potentially suitable habitat for this species.
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	Mammals	--	--	SSC	This species prefers moderate canopy coverage in oak woodland, chaparral or shrubland, and coniferous forest communities. The San Francisco dusky-footed woodrat builds complex nests from sticks and debris that can reach	*Known to occur.* This species does not have recorded occurrences within the project area but is confirmed to

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	Common Name						
						up to approximately 8 feet (2.5 m) wide and 6 feet (2 m) tall. Nests are typically occupied by a single adult, except for a short period of time after the female gives birth to her pups. The diet for this species consists of woody plant species such as maple, coffeeberry, alder, live oak, and elderberry.	occur through local expertise.
Oncorhynchus kisutch pop. 4	coho salmon - central California coast ESU	Fish	E	E	--	CCC Coho salmon spend approximately the first half of their life cycle rearing and feeding in streams and small freshwater tributaries. Spawning habitat is comprised of small streams with stable gravel substrates. These fish need cold, clean freshwater streams to lay their eggs, along with side channels and floodplains where young fish can find food and hide from predators. The remainder of their life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean (NOAA Fisheries, 2024). Timing of streamflows is critically important to CCC Coho salmon. Severe high flow events that occur early in winter (December, January) can scour holding pools, move large wood cover, open lagoon mouths for migration, and generally improve Coho habitat, while similar flood events later in the season (February, March) can wash away redds and eggs or flush juvenile CCC Coho out of over-	*Known to occur.* This species has an occurrence recorded along Waddell Creek and Skyline-To-The-Sea Trail.

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	Common Name						
						wintering habitat such as pools, side channels, or estuaries (California Trout, n.d.).	
Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	Fish	T	--	SSC	This is an anadromous fish species that occurs in freshwater Pacific coast streams. This steelhead species will migrate to marine waters once it nears maturity, then returns to freshwater streams for spawning. Typically, this species requires a minimal of approximately 7 inches of water depth for migration and favors spawning habitat between 6 and 24 inches deep, usually in slow moving currents. High water velocities and low water depth can impede this species' capability to migrate.	*Known to occur.* This species has occurrences recorded along Waddell Creek and Skyline-To-The-Sea Trail along Gazos Creek.
Pandion haliaetus	osprey	Birds	--	--	WL	This species inhabits coasts and shorelines, freshwater and saltwater wetlands, lakes, and ponds. This species typically nests in the open on poles, channel markers, dead trees, and often over water.	*May occur.* The project area may contain potentially suitable habitat for this species.
Polyphylla barbata	Mount Hermon (=barbate) June beetle	Insects	E	--	--	This species is only known for inhabiting the Zayante sandhills of Santa Cruz County.	*Unlikely to occur.* This species is only known for inhabiting the Zayante sandhills of Santa Cruz County, which are not in the project area.

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	**Common Name**						
Puma concolor	Mountain lion		--	CE	--	Prefers dense vegetative areas within mountain ranges of coniferous forests, scrub and oak woodlands, and arid communities.	*Known to occur.* This species does not have recorded occurrences within the project area through the CNDDB search area but is confirmed to occur through local expertise.
Rana boylii pop. 4	foothill yellow-legged frog - central coast DPS	Amphibians	T	E		There is a wide variety of vegetation types where the foothill yellow-legged frog could find habitat ranging from valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral, and wet meadows. This frog is frequently associated with streams and is hardly seen far from the edge. Habitat characteristics where breeding may occur includes shallow, rocky, and partially exposed to sunlight.	*Unlikely to to occur.* This species was recorded along Waddell Creek adjacent to Skyline-To-The-Sea Trail and Alder Trail camp many years ago but has not been seen in many years.
Rana draytonii	California red-legged frog	Amphibians	T	--	SSC	Common habitat consists of locations near ponds or along streams in humid forests, grasslands, and coastal scrub communities that contain plant cover. This species breeds in permanent water sources and requires moist refuges, like animal burrows, for cover in the dry season.	*Known to occur.* Occurrences of this species are recorded in the Theodore J. Hoover Natural Preserve, along Gazos creek in the northeastern portion of the project area, and along Cloverdale Road in the northwestern

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	Common Name						
							portion of the project area.
Riparia riparia	bank swallow	Birds	--	T		The bank swallow commonly breeds along ocean coasts, rivers, streams, lakes, reservoirs, and wetlands within vertical banks, cliffs, and bluffs in alluvial, friable soils. Historically, species were isolated to naturally made sites through mass wasting and weathering. As humans began to move earth and soil, bank swallows now use sites ranging from road cuts to sand and gravel quarries. Bank swallows avoid dense forests, woodlands, deserts, montane areas, and alpine areas due to the scarcity of suitable nesting habitat. In California, populations are observed to be about 6890 ft (2100 m) in elevation.	*May occur.* The project area may contain potentially suitable habitat for this species.
Speyeria zerene myrtleae	Myrtle's silverspot butterfly	Insects	E	--		These butterflies are found around coastal dunes, coastal prairies and coastal scrub that are protected from the wind and specifically have, *Viola adunca,* the caterpillars host plant. *Viola adunca* is commonly found along damp banks for on the edge of forest meadows. Ideal habitats for the Myrtle silver spot butterfly are buffered from onshore winds.	*May occur.* The project area may contain potentially suitable habitat for this species.

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	**Common Name**						
Spirinchus thaleichthys	longfin smelt	Fish	--	T		This species is euryhaline, meaning it can tolerate a wide range of salinities, and favors nearshore waters, estuaries, and lower freshwater streams. The longfin smelt forages on small shrimp-like crustaceans, such as opossum shrimp (UCANR, n.d.).	*May occur.* The project area may contain potentially suitable habitat for this species.
Taricha rivularis	red-bellied newt	Amphibians	--	--	SSC	This species is found in coastal woodlands and redwood forest along the coast of northern California. Larvae retreat into vegetation and under stones during the day.	*Unlikely to occur.* This species is primarily found north of SF Bay, but a small disjunct population has been found in a nearby quad within Stevens Creek in Santa Clara County. No species have been documented in the Waddell Creek.
Taxidea taxus	American badger	Mammals	--	--	SSC	Habitat consists of open areas such as prairies, farmland, and plains as well as edges of woods. The American badger is a nocturnal carnivore and its diet primarily consists of small rodents, reptiles, birds, and insects.	*May occur.* The project area may contain potentially suitable habitat for this species.
Thamnophis sirtalis tetrataenia	San Francisco gartersnake	Reptiles	E	E	FP	This species favors openings in grasslands or wetland areas near ponds, marshes, or sloughs and is capable of swimming. During the dry season, the San Francisco gartersnake may become dormant in rodent burrows. The primary diet consists of	*Known to occur.* There have been several documented occurrences of this species from wildlife surveys in the

Wildlife Species		Taxon Group	Federal Listing	State Listing	CDFW Listing	Habitat	Potential for Occurrence
Scientific Name	Common Name						
						amphibians, small mammals, reptiles, earthworms, slugs, slugs, and leeches.	Theodore J. Hoover Preserve.
Trimerotropis infantilis	Zayante band-winged grasshopper	Insects	E	--		This species is only known for inhabiting the Zayante sandhills of Santa Cruz County. They are commonly found directly on the sandy soil, or on the foliage of the silver bush lupine (*Lupinus albifrons*), which makes up 60% of their diet. Females lay eggs onto the sandy loose soil.	*Unlikely to occur.* This species is only known for inhabiting the Zayante sandhills of Santa Cruz County, which is not within the project area.

State and Federal Listing
- C – Candidate
- CE – Candidate Endangered
- CT – Candidate Threatened
- E – Endangered
- PE – Proposed Endangered
- PT – Proposed Threatened
- R – Rare
- T – Threatened

CDFW Listing
- FP – Fully Protected
- SSC – Species of Special Concern
- WL – Watch List

Table 7: Vegetation Alliances and Associated California Wildlife Habitat Relationship. Sensitive Natural Communities are indicated by an asterisk (*).

Vegetation Alliances and CWHRs		
Alliance	**Common Names**	**Associated CWHR(s)**
Acer macrophyllum – Alnus Rubra Mapping Unit*	Bigleaf maple forest and woodland	Montane Hardwood, Douglas-fir, Montane Hardwood-Conifer
Acer macrophyllum Mapping Unit	Bigleaf maple	Montane hardwood
Adenostoma fasciculatum Alliance	Chamise chaparral	Chamise-Redshank Chaparral
Aesculus californica alliance*	California buckeye	Montane hardwood
Arbutus menziesii Alliance	Madrone forest	Coastal Oak Woodland
Arctostaphylos (crustacea, tomentosa) Alliance *	Brittle leaf - woolly leaf manzanita chaparral	Mixed Chaparral
Arctostaphylos (nummularia, sensitiva) – Chrysolepis chrysophylla Alliance *	Glossy leaf manzanita - Golden chinquapin chaparral	Mixed Chaparral
Arid West Interior Freshwaster Marsh Group	--	--
Artemisisa californica – (Salvia leucophylla) Alliance	California sagebrush and purple sage	Coastal scrub
Baccharis pilularis Alliance	Coyote brush	Coastal Scrub
Californian Annual & Perennial Grassland Macrogroup	--	--
Ceanothus thrysiflorus Alliance	blue blossom	Mixed Chaparral
Eriophyllum staechadifolium – Erigeron glaucus – Eriogonum latifolium Alliance	Seaside woolly sunflower, seaside daisy, seaside buckwheat (CA coastal beach and dune group)	--
Forest Fragment	--	--
Frangula californica ssp. californica – Baccharis pilularis / Scrophularia californica Association	CA coffee berry - coyote brush	Coastal Scrub, Mixed Chaparral
Gaultheria shallon – Rubus (ursinus) Alliance	Salal - berry brambles	--
Hesperocyparis macrocarpa Ruderal Semi-Natural Association*	Monterey cypress	Closed-cone pine-cypress
Mesic Coastal Scrub Mapping Unit	--	Coastal scrub
Notholithocarpus densiflorus Alliance*	Tanoak forest	Montane Hardwood
Pinus attenuata Alliance	Knobcone pine forest and woodland	Closed-cone pine-cypress
Orchard or grove	--	--
Pacific Coastal Beach and Dune Mapping Unit	--	Coastal Scrub
Pinus attenuata Alliance	Knobcone pine	Closed-cone pine-cypress

Vegetation Alliances and CWHRs		
Alliance	**Common Names**	**Associated CWHR(s)**
Pinus muricata – Pinus radiata Alliance*	Bishop pine and Monterey Pine	Closed-cone pine-cypress
Pinus radiata Plantation Provisional Semi-Natural Association	Monterey Pine	Closed-cone pine-cypress
Populus trichocarpa alliance*	Black cottonwood	Valley foothill riparian
Pseudotsuga menziesii – Notholithocarpus densiflorus / Vaccinium ovatum Association*	Douglas-fir - tanoak forest /	Douglas-fir
Quercus agrifolia Alliance	Coast live oak woodland and forest	Coastal Oak Woodland
Quercus chrysolepis (tree) Alliance	Canyon live oak forest and woodland	Montane Hardwood
Salix gooddingii – Salix laevigata Alliance	Goodding's willow and red willow	Valley foothill riparian
Salix lasiolepis Alliance	Arroyo willow	Valley foothill riparian
Sequoia sempervirens Alliance*	Redwood forest and woodland	Redwood
Shrub Fragment	--	--
Toxicodendron diversilobum (Baccharis pilularis) Association	Poison oak and coyote brush	Coastal scrub
Umbellularia californica Mapping Unit*	California bay forest and woodland	Coastal Oak Woodland
Vancouverian Lowland Marsh, Wet Meadow & Shrubland Group	--	--

Impact BIO-1

Initial and maintenance treatments include the use of manual, mechanical, prescribed burning, and targeted herbicide treatment activities, which have the potential to impact special-status plant species if they are located within treatment areas. The potential for treatment activities to result in adverse effects to sensitive plant species either directly or through habitat modification was addressed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 132-139).

Per SPR BIO-1, review of the CNDDB and CNPS Inventory of Rare and Endangered Plants of California database was conducted to identify potential special-status plant species in the project area. The list was further refined via conversations with State Parks Senior Environmental Scientist, Tim Hyland. The search resulted in 59 special-status plant species, of which 7 are known to occur within the project area and 52 have potentially suitable habitat within the project area. The 7 special-status plants that are known to occur include: Monterey pine (*Pinus radiata*), San Francisco campion (*Silene verecunda ssp. verecunda*), San Francisco collinsia (*Collinsia multicolor*), Anderon's manzanita (*Arctostaphylos andersonii*), Choris' popcornflower (*Plagiobothrys chorisianus var. chorisianus*), pine rose (*Rosa pinetorum*), and Santa Cruz microseris (*Stebbinsoseris decipiens*) (Table 5).

The 52 species with suitable habitat outlined in Table 5 are associated with various habitat areas, including but not limited to conifer forest, oak woodland, redwood forest, coastal scrub, coastal bluffs, grasslands, riparian areas, and sandstone outcrops.

Reconnaissance level surveys were completed during the development of this PSA/Addendum pursuant to SPR BIO-1. In addition, pursuant to SPR BIO-7, a protocol-level survey will be conducted to determine if sensitive or special-status plants occur within the treatment areas and appropriate avoidance measures will be implemented on a per species basis. Where protocol-level surveys identify the presence of special status plants, Mitigation Measure BIO-1a would be implemented for any California Endangered Species Act (CESA) or federal Endangered Species Act (ESA) listed species. All other special-status plants would be covered under Mitigation Measure BIO-1b. Per Mitigation Measure BIO-1b, if special-status plants are identified during subsequent surveys, a no-disturbance buffer of at least 50 feet will be established around the area occupied by the species (unless established differently by a qualified RPF or other qualified professional) within which mechanical, manual, targeted herbicide application, and prescribed burning ignitions will not occur. The exception to these Mitigation Measures will occur if it is determined by a qualified RPF or botanist, in consultation with CDFW and USFWS when appropriate, that the listed plants would benefit from the treatment in occupied habitat area even though individual listed plants may be lost during treatment activities.

Furthermore, to minimize substantially affecting special-status plant species either directly or through habitat modifications, the following SPRs are integrated into the project design: create a burn plan using California State Parks Prescribed Burn Plan template to reduce the potential for runoff and soil erosion (SPR AQ-3), minimize dust during treatment activities (SPR AQ-4), review data and conduct reconnaissance surveys to identify potential sensitive biological resources (SPR BIO-1), conduct biological awareness training for all crew members and contractors prior to operations (SPR BIO-2), conduct protocol-level surveys for special-status plant species with the potential to be affected by a treatment prior to initiation of the treatment if SPR BIO-1 determines that suitable habitat may be present (SPR BIO-7), prevent the spread of invasive plants, noxious weeds, and invasive wildlife (SPR BIO-9), suspend mechanical operations during heavy precipitation (SPR GEO-1), stabilize mechanically disturbed soils in treatment areas (SPR GEO-3), conduct pre rainy-season inspections and monitor immediately following the first large rainfall event (SPR GEO-4), drain storm water via water breaks (SPR GEO-5), minimize erosion through the limitation of heavy equipment use on steep slopes (SPR GEO-7), and service and refuel equipment outside of WLPZs and wet areas (SPR HYD-5). Additionally, the PEIR determined that Mitigation

Measures will be required to reduce impacts to less than significant, therefore the following Mitigation Measures will be implemented: avoid the loss of special-status plants listed under CESA or ESA through the implementation of appropriate no-disturbance buffers (Mitigation Measure BIO-1a) and avoid the loss of special-status plants not listed under CESA or ESA through the implementation of appropriate no-disturbance buffers or designing treatments to maintain habitat function (Mitigation Measure BIO-1b). Mitigation Measure BIO-1c (compensate for the unavoidable loss of special-status plants if impacts cannot be feasibly avoided) will be determined to be applicable at the time of implementation, however, the project proponent expects the implementation of applicable SPRs, Mitigation Measures, and species-specific avoidance measures to avoid the loss of special-status plants. Through these SPRs and Mitigation Measures, the presence of sensitive-status plants will be determined, and substantial impacts will be avoided.

The potential for treatment activities to result in substantial adverse effects on special-status plants or habitat modification was examined in the PEIR. This impact on special-status plants is within the scope of the PEIR because the treatment activities, intensities, duration, and equipment are consistent with those analyzed in the PEIR. Based on the implementation of SPR AQ-3, SPR AQ-4, SPR BIO-1, SPR BIO-2, SPR BIO-7, SPR BIO-9, SPR GEO-1, SPR GEO-3, SPR GEO-4, SPR GEO-5, SPR GEO-7, SPR HYD-5, Mitigation Measures BIO-1a, BIO-1b, and BIO-1c (if applicable), and consistency with the PEIR, this impact is reduced to less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe impact than what was covered in the PEIR.

Addendum – Impact BIO-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, habitat characteristics and the potential for special-status plants to occur within the project area are essentially the same within and outside the treatable landscape.

In addition, as described under Section 1.2.3 Proposed Project Revisions, State Parks proposed to revise SPR GEO-1, which is applicable to this impact. SPR GEO-1 will be revised to suspend mechanical treatments if: (1) it is raining, (2) soils are saturated, and/or (3) soils are wet enough to be compacted by mechanical activities. This revision is consistent with the original purpose of SPR GEO-1 and the project proponent will be required to suspend mechanical disturbance during heavy precipitation to minimize the risk of soil compaction and soil disturbance. For the reasons described, proposed revisions to SPR GEO-1 and including land outside of the treatable landscape will not result in a substantially more severe significant effect related to substantial adverse impacts to special-status plants or habitat than what was covered in the PEIR.

Therefore, the potential impact on special-status plants is also less than significant with the implementation of the applicable SPR's and Mitigation Measures, as described above. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than was covered in the PEIR.

Impact BIO-2

Initial and maintenance treatments could result in direct or indirect adverse effects on special-status wildlife species and habitat suitable for these species within the project area, as described in the following sections. The potential for treatment activities to result in adverse effects to habitat and abundance of wildlife was addressed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 139-187).

Per SPR BIO-1, review of the CNDDB search area resulted in 37 special-status wildlife species and communication with State Parks Senior Environmental Scientist, Portia Halbert, indicate there are 14 special-status wildlife species known to occur within the project area, including Santa Cruz black salamander (*Aneides niger),* western bumble bee (*Bombus occidentalis*), marbled murrelet *(Brachyramphus marmoratus*)*,* western snowy plover (*Charadrius nivosus nivosus*), black swift (*Cypseloides niger*), California giant salamander (*Dicamptodon ensatus*), coho salmon – central California coast ESU (*Oncorhynchus kisutch pop. 4*), steelhead – central California coast DPS (*Oncorhynchus mykiss irideus pop. 8)*, mountain lion (*Puma concolor*), San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens)*, California red-legged frog (*Rana draytonii*), Northwestern pond turtle (*Actinemys marmorata*), San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), and tidewater goby (*Euclyclogobius newberryi*) (Table 6).

Additionally, there are 17 special-status wildlife species that have potentially suitable habitat within the project area including deciduous and mixed evergreen forest, oak woodland, forest edges, chaparral, riparian and wetland areas, coastal prairies, and rocky outcroppings.

Within the CalVTP PEIR (Table 3.6-33), the species with potentially suitable habitat within the project area are grouped into the following life history groupings: tree-nesting and cavity-nesting wildlife, shrub-nesting wildlife, ground-nesting wildlife, burrowing or denning wildlife, insects and other terrestrial invertebrates, bats, fish and aquatic invertebrates, and amphibians and reptiles.

To minimize substantially affecting special-status wildlife species in the life history groupings listed above either directly or through habitat modifications, the following SPRs are integrated into the project design: review data and conduct reconnaissance surveys to identify potential sensitive biological resources (SPR BIO-1), conduct biological awareness training for all crew members and contractors prior to operations (SPR BIO-2), conduct surveys of sensitive natural communities and habitats if adverse effects cannot be avoided (SPR BIO-3), design treatments to avoid loss of riparian habitat function and prevent vegetation removal that could reduce stream shading (SPR BIO-4), design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present (SPR BIO-5), identify and avoid or minimize impacts in Coastal Zone ESHAs (SPR BIO-8), conduct focused protocol-level surveys if suitable habitat for special-status wildlife species or nurseries of any wildlife species is present and cannot be avoided (SPR BIO-10), a Spill Prevention and Response Plan will be prepared prior to any herbicide treatment activities (SPR HAZ-5), compliance to herbicide application regulations including permitting and licensing through the respective county Agricultural Commissioner's office prior to herbicide application (SPR HAZ-6), identify and protect WLPZs with appropriate buffers (SPR HYD-4), and service and refuel equipment outside of WLPZs and wet areas (SPR HYD-5).

Additionally, based on the analysis provided below, Mitigation Measures BIO-2a (avoid mortality, injury, or disturbance and maintain habitat function for ESA, CESA, and CDFW fully protected wildlife species), BIO-2b (avoid mortality, injury, or disturbance and maintain habitat function for other special-status wildlife species), BIO-2e (retain special-status butterfly host plants), BIO-2f (avoid habitat for special-status beetles, flies, grasshoppers, and snails), BIO-2g (avoid mortality, injury, or disturbance and maintain function for special-status bumble bees), BIO-3a (design treatments to avoid loss of sensitive natural communities and oak woodlands), and BIO-4 (avoid state and federally protected wetlands) will be applied to minimize residual impacts to species that have potential to occur within the project area. Mitigation Measures BIO-2c (compensate for mortality, injury, or disturbance and loss of habitat function for special-status wildlife if applicable), BIO-3b (compensate for loss of sensitive natural communities and oak woodlands), and BIO-3c (compensate for unavoidable loss of riparian habitat) will be determined to be applicable at the time of implementation, however, the project proponent expects the implementation of applicable SPRs, Mitigation Measures, and species-specific avoidance measures to avoid mortality, injury or disturbance and maintain habitat function. Through the implementation of these SPRs and Mitigation Measures, the presence of sensitive-status wildlife will be determined and substantial impacts will be

avoided; special-status species that are known to occur within the project area are discussed below, however, the implementation of protocol-level surveys to identify the presence of additional special-status species negates the need to discuss all species returned from the CNDDB search.

Special-Status Amphibians and Reptiles Known to Occur within the Project Area:

The following section outlines the five special-status amphibian and reptile species that are known to occur within the project area.

The proposed manual, mechanical, targeted herbicide application, and prescribed burning treatments have the potential to result in direct or indirect adverse effects on special-status amphibians and reptiles through temporary impacts to habitats. The potential for treatment activities to result in adverse effects to special-status amphibians and reptiles was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 182-185).

The project area contains suitable habitat for various amphibians and reptiles in the form of creeks, streams, wet areas, a reservoir, and terrestrial upland habitat. Prescribed broadcast burning treatments and manual treatments may be located adjacent to East Waddell Creek, West Waddell Creek, Gazos Creek, Opal Creek, Berry Creek, and Union Creek as well as several other Class II watercourses that serve as tributaries that may contain suitable habitat for these species. Prescribed burning could result in adverse effects if piles are located on top of burrows or if located in smaller aquatic features. Also, prescribed burning may include the use of accelerants, which could be toxic to some wildlife. According to the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, page 183), manual treatments are less likely to adversely impact special-status amphibians or reptiles but could still result in damage to habitat or mortality if present. Mechanized treatments are proposed within 500 feet of suitable habitat throughout the project area and have potential to result in adverse impacts to aquatic features. Targeted herbicide treatments, although applied minimally, could result in adverse effects to amphibians or reptiles within terrestrial or aquatic habitat if ingested or if the animal has direct contact.

To minimize impacts to special-status amphibians and reptiles, including salamanders and frogs, the following SPRs are integrated into the treatment design: SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-8, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, and SPR HYD-5. As stated in the PEIR, the implementation of these SPRs would minimize impacts, however, treatment activities could still result in direct or indirect adverse effects to special-status amphibians and reptiles if these species and their habitat are not sufficiently avoided after identification and during the implementation of the SPRs.

Consistent with the PEIR, implementation of the SPRs reduce the likelihood of adverse impacts to special-status amphibians and reptiles within river, stream, and lake habitats to less than significant, while impacts to special-status amphibians and reptiles with smaller aquatic features (i.e., wetlands and vernal pools), or associated riparian habitat would remain potentially significant and unavoidable. However, after the implementation of Mitigation Measures BIO-2a, BIO-2b, BIO-3a, and BIO-4, all impacts to special-status amphibians and reptiles are reduced to less than significant. Species-specific information and additional avoidance measures for the four amphibian or reptile species known to occur within the project area are outlined in the sections below.

Santa Cruz black salamander and California giant salamander

Santa Cruz black salamander (*Aneides niger*) and California giant salamander (*Dicamptodon ensatus*) are two special-status salamanders known to occur within the project area. California giant salamander is a CDFW species of special concern, whose aquatic habitat includes lakes, ponds, rivers, streams, or fast-moving water. Upland habitat for the California giant salamander requires cover for sun protection and hiding, such as rocks, logs, or stones. This species has

occurrences recorded along the Skyline-To-The-Sea Trail and Waddell Creek, and along Gazos Creek Road and Gazos Creek.

The Santa Cruz black salamander is endemic to California and is a CDFW species of special concern, that occurs in mixed deciduous woodland, coniferous forest, coastal grasslands, and riparian areas near streams or under debris, although, this species does not inhabit streams. This species has occurrences recorded along Waddell Creek and Skyline-To-The-Sea Trail in the southern portion of the project area, along Gazos Creek Road and Gazos Creek, adjacent to Berry Creek in the eastern portion of the project area, and adjacent to Cloverdale Road and Old Woman's Creek in the northwestern portion of the project area. There are various watercourses located throughout the project area that will be in proximity to or overlap with treatments.

In accordance with SPR BIO-10, a focused survey will be performed to determine whether there will be any potential for special-status wildlife, including salamanders, to occur within the project area. However, because California giant salamander and Santa Cruz black salamander have the potential to be present year-round within the project area, the species can most likely be avoided by initial and maintenance treatments through the implementation of SPRs. WLPZs adjacent to aquatic habitat within the treatment area would be established per SPR HYD-4, which would reduce adverse effects, however, these measures may not result in full avoidance, specifically because prescribed broadcast burning has the potential to burn through WLPZs. Depending on the speed and intensity of a prescribed burn, special-status reptiles and amphibians may remain burrowed underground or escape the area during a broadcast burn. Additionally, there may be no permanent adverse effects on burrows and other areas occupied by the species during prescribed fire.

Mechanical and manual treatments still have the potential to result in adverse effects to special-status amphibians and wildlife. As a result, SPR BIO-10 would apply, requiring focused surveys for special-status salamanders to be conducted within suitable habitat prior to the implementation of treatments. If no special-status salamanders are detected within the treatment area, then no mitigation measures are required. However, if special-status salamanders are detected, then Mitigation Measure BIO-2a and/or Mitigation Measure BIO-2b would be implemented dependent on the listing status, requiring biological monitoring for treatment activities within or adjacent to sensitive habitat areas; mostly likely where work would occur in the WLPZ, flagging for avoidance, relocation of individual animals by qualified individuals, and/or other measures required to avoid injury or mortality of the species.

In the case that the Santa Cruz black salamander or California giant salamander are identified, Mitigation Measure BIO-2b would apply because both species are not listed under CESA or ESA or Fully Protected but meet the definition of special status as defined in the PEIR Section 3.6.1. These measures would be applied for manual and mechanical treatments where ground disturbance is expected. In addition, to avoid and minimize impacts from herbicides to special-status salamanders, SPR HAZ-5, SPR HAZ-6, SPR HYD-4, and SPR HYD-5 would be implemented. The implementation of Mitigation Measure BIO-3a will minimize impacts to upland and riparian habitat and Mitigation Measure BIO-4 will further reduce potential impacts by requiring protection of state and federally protected wetlands, which could provide aquatic habitat for special-status salamanders.

Pursuant to SPR BIO-4, at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation within riparian corridors in the WLPZ will be maintained. Treatments are designed to retain pockets of vegetation outside and within the dripline of retained

trees to create a mosaic of shrubs and other vegetation where broadcast burning is not applied. In addition, downed logs greater than 12 inches DBH will be retained in forest settings with preference for the larger, complex logs, totaling approximately 10 tons per acre or 4 logs that are approximately 15 feet long, and herbaceous understory components will be maintained as much as feasible. These retention standards will maintain habitat for Santa Cruz black salamander or California giant salamander.

The impact on special-status salamanders is within the scope of the PEIR because the affected salamander species were covered in the PEIR, and the intensity and duration of proposed treatment activities and subsequent disturbance are consistent with those analyzed in the PEIR. Based on the implementation of SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, SPR HYD-5, Mitigation Measures BIO-2b, BIO-3a, BIO-4, and consistency with the PEIR, impacts to the Santa Cruz black salamander, California giant salamander, or other special-status wildlife within the amphibians and reptiles life history group will be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

California red-legged frog

The California red-legged frog (*Rana draytonii*) is a special-status frog known to occur within the project area. It is a federally threatened and CDFW species of special concern. California red-legged frog is endemic to California and Baja California, Mexico. 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. Movements through upland habitat are known to occur up to approximately 1 mile over the course of a wet season (Bulger et al. 2003). However, studies have demonstrated that California red-legged frogs generally remain very close to breeding ponds during the nonbreeding season and typically do not move more than a few hundred feet into upland habitats (Bulger et al. 2003 and Fellers & Kleeman 2007). California red-legged frogs generally make overland movements (i.e., dispersal, migration, foraging) during the wet season (i.e., October to May) and these movements are typically made at night (Bulger et al. 2003). Occurrences of this species are recorded in the Theodore J. Hoover Natural Preserve, along Gazos Creek in the northeastern portion of the project area, and along Cloverdale Road in the northwestern portion of the project area.

Foothill yellow-legged frog is not found within the project area; a letter developed by State Parks Senior Environmental Scientist, Portia Halbert, in 2023, indicates that no foothill yellow-legged frogs have been documented within the BBRSP and suggests that the recorded CNDDB occurrence of the foothill yellow-legged frog mapped within BBRSP has inaccurate coordinates as it is described to be located outside of the project area (Attachment G). Although the foothill yellow-legged frog is unlikely to occur within the project area, a brief summary of this species is described here in the case that surveys under SPR BIO-10 result in identifying presence of foothill yellow-legged frog; avoidance measures outlined in this PSA/Addendum for California red-legged frogs are intended to apply to foothill yellow-legged frogs if they are observed during surveys. The foothill yellow-legged frog is a federally threatened species and state endangered species. Habitat for the foothill yellow-legged frog is typically found in perennial streams and directly adjacent to 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 observation (CDFW, 2018).

Because there are recorded occurrences of California red-legged frog within the project area and because the treatment areas contain suitable upland habitat, presence is assumed unless surveys demonstrate otherwise.

Any observations of California red-legged frog prior to or during treatments will result in a "cease operations" order within 100 feet and a qualified biologist will be consulted to determine appropriate protection measures for the species. The animal may only be moved by people authorized to do so with the appropriate permits.

SPR HYD-4 will require the establishment of WLPZs adjacent to any Class I, Class II, or Class III streams within 300 feet of the treatment area, where heavy equipment operation, equipment fueling, placement of burn piles, and fire ignition is prohibited within these buffers. In addition, treatment activities will be implemented in compliance with state water quality regulations pursuant to SPR HYD-1, which will further protect potential aquatic habitat. Implementation of SPR HYD-1 and SPR HYD-4 will provide maximum support to avoid injury or death of California red-legged frog within aquatic habitat.

Treatment activities, including prescribed burning, mechanical treatments, manual tree and snag removal, and targeted herbicide application, could occur in upland habitat which could result in adverse effects such as injury or mortality. Therefore, pursuant to SPR BIO-1, SPR BIO-10 will apply. Per SPR BIO-10, a focused survey will be performed prior to treatment activities, as well as periodically throughout the lifespan of this PSA/Addendum by a qualified RPF, biologist, or biological monitor, prior to implementation of any treatment activities (i.e., within 7 days of any mechanical, manual, and herbicide) (1) within 300 feet of a Class I or Class II stream and within or adjacent to other sensitive habitat areas (e.g., wet intermittent streams, wet seeps), (2) during the California red-legged frog dispersal season (October 1 through April 1) or (3) within 24 hours following a rain event greater than one quarter inch. If no California red-legged frogs are observed during focused surveys, then additional mitigation will not be required. If California red-legged frogs are observed during focused surveys, or presence of these species is assumed, then Mitigation Measure BIO-2a and Mitigation Measure 2b will be implemented. Under Mitigation Measure BIO-2a and Mitigation Measure 2b, biological monitoring by a qualified biologist, RPF, or biological technician during treatment activities will be implemented to avoid injury to or mortality of individual California red-legged frogs.

Additionally, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, and SPR HYD-5 will be implemented to minimize adverse effects during target herbicide treatments.

Furthermore, pursuant to SPR BIO-4, at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation within riparian corridors in the WLPZ will be maintained. Treatments are designed to retain pockets of vegetation outside and within the dripline of retained trees to create a mosaic of shrubs and other vegetation where broadcast burning is not applied. In addition, downed logs greater than 12 inches DBH will be retained in forest settings with preference for the larger, complex logs, totaling approximately 10 tons per acre or 4 logs approximately 15 feet long, and herbaceous understory components will be maintained as much as feasible. These retention standards will maintain habitat for California red-legged frog. Additionally, impacts on riparian and upland forested habitat for California red-legged frog will be avoided or minimized through implementation of Mitigation Measure BIO-3a (see Impact BIO-3).

Mitigation Measure BIO-4 will further reduce potential impacts by requiring protection of state and federally protected wetlands, which could provide aquatic habitat for California red-legged frog (see Impact BIO-4).

Additional avoidance measures for California red-legged frog include:

- Mechanized operations will cease for 24 hours after a rain event defined as any precipitation resulting in 0.2 inches and up to 1.0 inch in a 24-hour period, throughout the year to avoid dispersing California red-legged frog.
- Mechanized operations will cease for 48 hours after a rain event resulting in precipitation of 1.0 inch to 2.0 inches in a 24-hour period.
- Mechanized operations will cease for 72 hours after a rain event resulting in precipitation of 2.0 inches or greater in a 24-hour period.
- Hand work without the use of tracked chippers or other mechanized heavy equipment may continue following rain events.

The impact on special-status frogs is within the scope of the PEIR because the affected special-status frog species were covered in the PEIR, and the intensity and duration of proposed treatment activities and subsequent disturbance are consistent with those analyzed in the PEIR. Based on the implementation of SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, SPR HYD-5, Mitigation Measures BIO-2a, BIO-2b, BIO-3a, BIO-4, and consistency with the PEIR, impacts to the California red-legged frog, or other special-status wildlife within the amphibians and reptiles life history group will be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

San Francisco garter snake

The San Francisco garter snake (SFGS) (*Thamnophis sirtalis tetrataenia)* is a state and federally listed Endangered species and a CDFW Fully Protected Species. SFGS is a subspecies to the common garter snake (*Thamnophis sirtalis*) and is endemic to the San Francisco Peninsula, currently restricted to San Mateo County and northwestern Santa Cruz County (USFS 2020). SFGS are often found in aquatic habitats or in adjacent upland grasslands, meadows, and shrubby areas. SFGS prefer slow moving water (at least 1 foot in depth) with emergent vegetation, ideally near open hillsides with access to adequate sun and cover provided by dense, shrubby vegetation and rodent burrows.

Treatment activities, including mechanical, manual, targeted herbicide treatments, and prescribed burning, may occur in suitable habitat, including high-trafficked upland habitat, for the SFGS; more specifically, manual and prescribed broadcast burning may occur within suitable aquatic habitat within WLPZ buffers. Therefore, periodic pre-treatment activity surveys will occur within suitable habitat prior to the initiation of treatment activities (within 7 days). Additionally, SPR BIO-10 requires the project proponent to perform focused surveys for SFGS within suitable high-traffic upland habitats and aquatic habitat in treatment areas. SPR HYD-4 will require the establishment of WLPZs adjacent to any Class I, Class II, or Class III streams within 300 feet of the treatment area, where heavy equipment operation, equipment fueling, placement of burn piles, and fire ignition is prohibited within these buffers

If San Francisco garter snakes are identified during focused surveys, Mitigation Measure BIO-2a for this species would be implemented. Under Mitigation Measure BIO-2a, the project proponent would require biological monitoring for treatment activities within or adjacent to sensitive habitat

areas (e.g., streams, pond, etc.), flagging of areas for avoidance, and/or other measures recommended by CDFW as necessary to avoid injury to or mortality of these species.

SPR BIO-2 will conduct a biological awareness training for all crew members and contractors prior to operations to learn how to identify sensitive species. If a San Francisco garter snake enters a treatment area, all work would stop within 300 feet of the individual, and the snake will be allowed to leave on its own. If a San Francisco garter snake enters a treatment area and will not or cannot leave on its own, the biological monitor will contact a USFWS, CDFW, or qualified California State Parks biologists with the necessary permits to determine a course of action.

Pursuant to SPR BIO-4, at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation within riparian corridors in the WLPZ will be maintained. Treatments are designed to retain pockets of vegetation outside and within the dripline of retained trees to create a mosaic of shrubs and other vegetation where broadcast burning is not applied. In addition, downed logs greater than 12 inches DBH will be retained in forest settings with preference for the larger, complex logs, totaling approximately 10 tons per acre or 4 logs approximately 15 feet long, and herbaceous understory components will be maintained as much as feasible. These retention standards will maintain habitat for SFGS. Additionally, impacts on riparian and upland forested habitat for SFGS will be avoided or minimized through implementation of Mitigation Measure BIO-3a (see Impact BIO-3).

The potential for treatment activities including maintenance treatments to result in adverse effects on SFGS was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6 pages 138 to 184). SFGS is within the scope of the PEIR because effects on SFGS 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. Based on the implementation of SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, SPR HYD-5, Mitigation Measures BIO-2a, BIO-2b, BIO-3a, BIO-4, and consistency with the PEIR, impacts to the SFGS, or other special-status wildlife within the amphibians and reptiles life history group will be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Northwestern pond turtle

Northwestern pond turtle (NWPT) (*Actinemys marmota*) is a CDFW species of special concern. This species has brown to black upper shells and black and yellow on their lower shell. Their heads and legs are dark colored, and mature individuals are typically 6 to 8 inches in length. The species' habitat includes streams, ponds, lakes, and permanent and ephemeral wetlands. In addition to those locations, the NWPT requires terrestrial habitats for nesting, which occurs form late May until the middle of July. They typically favor terrestrial habitat upland from aquatic habitat, preferring sites with dry soil, sparse vegetation, and southern exposures.

In accordance with SPR BIO-1, a reconnaissance level survey was completed to determine that this species occurs within the project area. Pre-treatment activity surveys will be performed prior to operations as well periodically throughout the lifespan of this permitting document. Treatment activities, including prescribed burning, mechanical, manual, and targeted herbicide application, could occur in suitable habitat for NWPT which could result in adverse effects such as injury or mortality. Therefore, pursuant to SPR BIO-1, SPR BIO-10 will apply. Per SPR BIO-10, a focused survey will be performed prior to treatment activities, as well as periodically throughout the lifespan of this PSA/Addendum by a qualified RPF, biologist, or biological monitor, prior to implementation of any treatment activities. If focused surveys indicate occupancy by NWPT, then

occupied areas shall be flagged and avoided. Additionally, SPRs applied to other non-listed special status herptiles will be applied to NWPT as well.

Habitat function for NWPT would be maintained because treatment activities and maintenance treatments resulting in ground disturbance would not occur within aquatic habitat, riparian habitat, or WLPZs adjacent to treatment areas. For select treatments that will require treatment within WLPZ designated areas or in proximity to aquatic habitats, focused surveys will be applied prior to operations. Additionally, pursuant to SPR BIO-4, at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation within riparian corridors in the WLPZ will be maintained. Treatments are designed to retain pockets of vegetation outside and within the dripline of retained trees to create a mosaic of shrubs and other vegetation where broadcast burning is not applied. In addition, downed logs greater than 12 inches DBH will be retained in forest settings with preference for the larger, complex logs, totaling approximately 10 tons per acre or 4 logs approximately 15 feet long, and herbaceous understory components will be maintained as much as feasible. These retention standards will maintain habitat for NWPT. Additionally, impacts on riparian and upland forested habitat for NWPT will be avoided or minimized through implementation of Mitigation Measure BIO-3a (see Impact BIO-3).

The potential for treatment activities including maintenance treatments to result in adverse effects on NWPT was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6 pages 138 to 184). The impact to NWPT is within the scope of the PEIR because the NWPT was covered in the PEIR, and the intensity and duration of proposed treatment activities and subsequent disturbance are consistent with those analyzed in the PEIR. Based on the implementation of SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, SPR HYD-5, Mitigation Measures BIO-2a, BIO-3a, BIO-4, and consistency with the PEIR, impacts to the NWPT, or other special-status wildlife within the amphibians and reptiles life history group will be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-Status Tree-Nesting and Cavity-Nesting Wildlife Known to Occur within the Project Area

The following section outlines two special-status tree-nesting wildlife species that are known to occur within the project area.

The proposed manual, mechanical, targeted herbicide application, and prescribed burning treatments have the potential to result in direct or indirect adverse effects on special-status tree-nesting of cavity-nesting wildlife through temporary impacts to habitats. The potential for treatment activities to result in adverse effects to special-status tree-nesting or cavity-nesting wildlife was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 144-153).

To minimize impacts to special-status tree-nesting or cavity-nesting wildlife, the following SPRs are integrated into the treatment design: SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. As stated in the PEIR, the implementation of these SPRs would minimize impacts, however, treatment activities could still result in direct or indirect adverse effects to special-status tree-nesting and cavity nesting species if these species and their habitat are not sufficiently avoided after identification and during the implementation of the SPRs.

Consistent with the PEIR, implementation of the SPRs reduces the likelihood of adverse impacts to special-status tree-nesting and cavity-nesting species, although, impacts would remain potentially significant and unavoidable. However, after the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-3a, all impacts to special-status tree-nesting and cavity-nesting special-status species are reduced to less than significant. Species-specific information and additional avoidance measures are

outlined in the section below for the two tree-nesting or cavity-nesting species known to occur within the project area.

Marbled Murrelet

The marbled murrelet (*Brachyramphus marmoratus*) is a federally threatened and state endangered seabird that nests in old-growth or very large second-growth Douglas-fir and coast redwood trees. Throughout the entirety of their range, marbled murrelets occur from the Aleutian Islands in Alaska along the Pacific Coast south to Santa Cruz County, California. Marbled murrelets rely on suitable nesting platforms formed by flat or depressed portions of large lateral branches, typical of old trees with complex canopy structures. Within the Santa Cruz Mountains, marbled murrelets typically breed between March and September, relying remaining stands of old-growth trees as well as older, more developed stands of second-growth trees.

The project area is located in breeding Zone 6 within the Santa Cruz Mountains. Zone 6 constitutes the northwest Santa Cruz Mountains, extending from Santa Cruz in the south to San Francisco in the north and supports a genetically distinct population of the species. The breeding habitat within Zone 6 generally ranges from the Pilarcitos Creek watershed in the north to the Fall Creek Unit of Henry Cowell Redwoods State Park in the south, with the summit of the Santa Cruz Mountains serving as the easternmost breeding habitat in the region. According to the data review pursuant to SPR BIO-1, marbled murrelets are known to occur within the project area. This species has occurrences recorded near various drainages throughout the project area, including Gazos Creek, Whitehouse Creek, Berry Creek, Cascade Creek, and West Waddell Creek. Ongoing marbled murrelet monitoring efforts in Big Basin Redwoods State Park, Butano State Park, and Cascade Creek (STRL), which include portions of the project area, include inland forest audio-visual (AV) surveys, radar surveys, and audio recording units (ARUs). Survey locations within and adjacent to the project area include Berry Creek, Cascade Creek, Gazos Mountain Camp, Double Low Gazos, Redwood Meadow, 100 Area Woods, Sempervirens, Huckleberry, Blooms Creek, Ray Linder Butano Ridge, Ben Reis, and Little Butano.

Like other tree-nesting and cavity-nesting species, SPRs BIO-1 through SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, and SPR HYD-5 will be applied to minimize impacts to the marbled murrelet. Additionally, in accordance with Mitigation Measure BIO-2a for species listed under ESA and/or CESA, mortality, injury, and disturbance will be avoided and habitat function maintained through the adoption of the applicable recommended minimization and avoidance measures outlined in the *Avoidance Measure Recommendations for Marbled Murrelets in the Santa Cruz Mountains Following the CZU Lightning Complex* (Attachment H). Mitigation Measure BIO-3a will also be implemented to avoid loss of sensitive natural communities in which marbled murrelet habitat exists, such as redwood forest and Douglas-fir – tanoak forest alliances.

Per the recommendations in *Attachment H* that resulted from discussions with CDFW, USFWS, and the California Department of Parks and Recreation the following applicable recommendations will be adhered to within the project area (see *Attachment H* for a full list of recommendations that apply to additional areas within the Santa Cruz Mountains; see Figure 2):

1. **Operational Window:** High decibel work in proximity or within areas identified as murrelet habitat, occupied or important habitat areas in the Santa Cruz Mountains may begin on August 5th and continue to March 24th, except for the following conditions:
    a. At sites that are known as prime unburned (pre-CZU Fire) habitat for marbled murrelets where the project proponent will avoid working until September 1st, unless new AV or ARU data suggests different dates when murrelets nest in these areas.

b. High decibel work may occur year around in areas of the CZU Fire that burned at moderate-high and high severities (https://sig-gis.com/czu-lightning-complex-map/) within the CZU Fire where murrelet habitat was significantly compromised or destroyed.

2. **Working Hours:** The project proponent will not work during the dawn and dusk period in areas identified as murrelet habitat, occupied or important areas that experienced low or moderate burn severity. Work from 1.5 hours after sunrise to 1 hour before sunset between March 24th – August 5th.
3. **Noise Restrictions:** Noise restrictions should be in place that address any chronic noise production or new noise that is 30-35 dB above background. These noises should be carefully evaluated and minimized to the extent possible.
    a. **Habitat Buffer:** Sound analysis work and data indicates that in areas of low to moderate fire severity, where areas identified as murrelet habitat, occupied or important habitat areas in the Santa Cruz Mountains still exists, buffers can be reduced to 330 feet to allow larger handwork crews and mastication equipment to conduct forest restoration and resilience treatments greater than normal routine maintenance actions and park use, from March 24th – September 1st within marbled murrelet important areas.
4. **Strategic Planning:** The project proponent will time forestry work to occur as far from murrelet habitat in the July timeframe and work towards murrelet habitat.
5. **Continued monitoring:** AV and ARU monitoring should continue in areas where these recommendations are being followed to monitor changes in murrelet behavior supporting adaptive management strategies as needed to protect the species.[6]

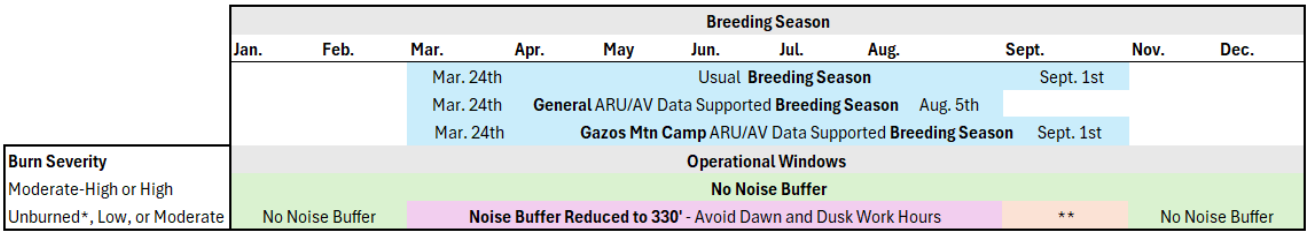


Figure 2: Marbled Murrelet Breeding Season and Operational Windows for this PSA/Addendum

The potential for treatment activities including maintenance treatments to result in adverse effects on marbled murrelets was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 139-153). Potential impacts to marbled murrelets are within the scope of the PEIR because effects to marbled murrelets 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. Furthermore, habitat function for marbled murrelets would be maintained because treatment activities and maintenance treatments would not target potential marbled murrelet

[6] Per *Attachment H*, recommendations are locally applicable to Santa Cruz District State Parks and San Mateo County Park lands including Big Basin Redwoods State Park, Portola Redwoods State Park, Butano State Park, Pescadero Creek County Park, Memorial County Park and Sam McDonald County Park. Refer to *Attachment H* for site specific information areas outside of this project area.

nesting habitat. Based on the implementation of SPR BIO-1 through SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-5, Mitigation Measures BIO-2a, BIO-2b, BIO-3a, and consistency with the PEIR, impacts to marbled murrelets or other special-status wildlife within the tree-nesting and cavity-nesting life history groups is reduced to less than significant. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Black Swift

Black swift (*Cypseloides niger*) is listed by the CDFW as a species of special concern. They have long, curved, and pointed wings. Their tail is slightly notched but often appears square. It has a tiny, almost invisible bill and very small feet. The species are entirely blackish with whitish spots on the side of the forehead that are difficult to see on flying birds. Juveniles are blackish with white edging on the body and flight feathers. They nest on cliff ledges and behind waterfalls in areas inaccessible to predators. Black swifts forage over forests and open areas. This species has an occurrence recorded along Berry Creek adjacent to West Waddel Creek State Wilderness.

Due to their preference to nest on cliff ledges and behind waterfalls, it is unlikely that black swift nesting habitat will be impacted by treatment activities within the project area. Furthermore, per Mitigation Measure 3a, habitat functions will be maintained because treatment activities will avoid the loss of sensitive natural communities that may impact black swift habitat or foraging habitat. Generally, treatment activities will retain dominant canopy trees and maintain open areas, which is desirable foraging habitat for black swifts.

In accordance with SPR BIO-10, a focused survey will be performed prior to operations as well as periodically throughout the lifespan of this PSA/Addendum. If Black Swift nests are identified within treatment areas during focused surveys, a no-disturbance buffer of sufficient size to prevent disturbance would be established around nests to prevent accidental encroachment by vehicles, equipment, or personnel.

The potential for treatment activities to result in adverse effects to Black swifts was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 144-153).

To minimize impacts to black swift or other special-status tree-nesting or cavity-nesting wildlife, the following SPRs are integrated into the treatment design: SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. As stated in the PEIR, the implementation of these SPRs would minimize impacts, however, treatment activities could still result in direct or indirect adverse effects to special-status tree-nesting and cavity nesting species if these species and their habitat are not sufficiently avoided after identification and during the implementation of the SPRs.

Consistent with the PEIR, implementation of the SPRs reduces the likelihood of adverse impacts to black swift or other special-status tree-nesting and cavity-nesting species, although, impacts would remain potentially significant and unavoidable. However, after the implementation of Mitigation Measures BIO-2b, and BIO-3a, all impacts to black swift or other special-status tree-nesting and cavity-nesting special-status species are reduced to less than significant.

Special-Status Ground Nesting Wildlife Known to Occur within the Project Area:

The following section outlines two special-status ground nesting wildlife species that is known to occur within the project area.

The proposed manual, mechanical, targeted herbicide application, and prescribed burning treatments have the potential to result in direct or indirect adverse effects on special-status ground nesting wildlife

through temporary impacts to habitats. The potential for treatment activities to result in adverse effects to special-status ground nesting wildlife was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 158-161).

To minimize impacts to special-status ground nesting wildlife, the following SPRs are integrated into the treatment design: SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. As stated in the PEIR, the implementation of these SPRs would minimize impacts, however, treatment activities could still result in direct or indirect adverse effects to special-status ground nesting wildlife species if these species and their habitat are not sufficiently avoided after identification and during the implementation of the SPRs.

Consistent with the PEIR, implementation of the SPRs reduces the likelihood of adverse impacts to special-status ground nesting wildlife species, although, impacts would remain potentially significant and unavoidable. However, after the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-3a, all impacts to special-status ground nesting special-status species are reduced to less than significant. Species-specific information and additional avoidance measures are outlined in the section below for the two ground nesting species known to occur within the project area.

San Francisco dusty footed woodrat

The San Francisco dusky-footed woodrat (*Neotoma fuscipes annectensi*) is a CDFW listed species of special concern. This rodent species can reach approximately 9 inches in length (body), with an additional 6.5-to-8-inch tail. The San Francisco dusky-footed woodrat has large round ears and light colored, slightly hairy feet. Although CNDDB did not yield any confirmed occurrences for San Francisco dusky-footed woodrat within the project area, local knowledge of the project area indicates that this species is known to occur and the project area contains suitable habitat; the nearest recorded occurrences are located in the vicinity of Davenport. San Francisco dusky-footed woodrat construct nests, also known as middens, with vegetative material including grass, leaves, and woody material. Nests can reach up to 8 feet wide and 6 feet tall and are typically occupied by a single adult, except during short periods during pupping season. San Francisco dusky-footed woodrat prefer moderate canopy cover in oak woodland, chaparral or shrubland, and conifer forest communities.

Manual, mechanical, and prescribed burning treatment activities may result in inadvertent disturbance to, injury to, or mortality of individual San Francisco dusky-footed woodrats or destruction of nests by equipment or personnel. Furthermore, heavy machinery, personnel, or vehicles may inadvertently destroy occupied nests. While targeted herbicide treatments are not expected to disturb woodrats or nests, they have the potential for adverse effects due to accidental exposure to chemicals. The potential for adverse effects from targeted herbicide treatments would be avoided and minimized through the implementation of SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. 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 Section 3.6.3 pages 138 to 184).

In accordance with SPR BIO-10, a focused survey will be performed prior to operations as well as periodically throughout the lifespan of this permitting document. If San Francisco dusky-footed woodrat nests are detected within treatment areas during focused surveys, woodrat nests will be marked by flagging or electronic mapping where feasible (given that the nest is reasonably accessible to mark appropriately) with a five (5) feet to ten (10) feet buffer that may be adjusted per a determination by a qualified RPF or biologist. Per SPR BIO-2 contractors will also be given

environmental awareness training that will include information to support contractor identification of wood rat nests to maximize avoidance. If San Francisco dusky-footed woodrat nests within treatment areas cannot be avoided, nest removal may occur only outside the breeding season (January 1st - September 30th), if feasible. If San Francisco dusky-footed woodrat must be removed during the breeding season, they will be slowly removed by hand to determine if young are present. If young are present the nest material shall be replaced and the nest left alone for 2-3 weeks at which time the nest can be rechecked to verify that young are capable of independent survival before proceeding with nest dismantling. Furthermore, nest removal efforts should not take place during inclement weather or extreme weather conditions and should take place at dusk or dawn, when woodrats are least susceptible to predators. Additionally, prior to nest removal, safety precautions should be employed to minimize potential human exposure to possible diseases and viruses carried by woodrats; adequate protection, such as protective clothing, equipment and tools, gloves, and appropriate masks, should be used to ensure the health and safety of humans removing the nests.

Pursuant to Mitigation Measure BIO-2b, prescribed broadcast burning will be avoided, when feasible, in known woodrat locations during peak breeding season in mid-spring (April 15th – May 15th).

Per Mitigation Measure BIO-3a, habitat function for San Francisco dusky-footed woodrat would be maintained because a sufficient level of downed logs, woody debris, and vegetative material would be retained within the treatment area, which would provide cover and forage for the species.

The potential for treatment activities including maintenance treatments to result in adverse effects on the San Francisco dusky-footed woodrat was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 158-161). Potential impacts to San Francisco dusky-footed woodrat are within the scope of the PEIR because effects to San Francisco dusky-footed woodrats 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. Based on the implementation of SPR BIO-1 through SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-5, Mitigation Measures BIO-2b, BIO-3a, and consistency with the PEIR, impacts to San Francisco dusky-footed woodrat or other special-status wildlife within the ground-nesting life history group is reduced to less than significant. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Western Snowy Plover

The western snowy plover (*Charadrius nivosus nivosus*) is listed as threatened federally and is a CDFW species of special concern. This species is a small shore bird that has a short neck and horizontal posture. Breeding adults have a black crown stripe, a dark ear patch, and black patch on the side of their neck. Nonbreeding/immature individuals lack the dark crown stripe and have a paler neck stripe. During the breeding season, the western snowy plover can be seen nesting along seashores, peninsulas, offshore islands, bays, estuaries, and rivers. This species has an occurrence recorded in the southwestern portion of the project area adjacent to State Highway 1 and Waddell Creek.

Manual, mechanical, and prescribed burning treatment activities may result in inadvertent disturbance to, injury to, or mortality of individual western snowy plovers or destruction of nests by equipment or personnel. However, suitable western snowy plover habitat is not likely to occur in any of the planned broadcast burn units in the project area (Map 6). Nonetheless, heavy

machinery, personnel, or vehicles may inadvertently destroy occupied nests. While targeted herbicide treatments are not expected to disturb western snowy plovers or nests, they have the potential for adverse effects due to accidental exposure to chemicals. The potential for adverse effects from targeted herbicide treatments would be avoided and minimized through the implementation of SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. The potential for treatment activities, including maintenance treatments, to result in adverse effects on western snowy plovers was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3 pages 138 to 184).

In accordance with SPR BIO-10, a focused survey will be performed prior to operations as well as periodically throughout the lifespan of this PSA/Addendum. If western snowy plover nests are detected within treatment areas during focused surveys, a no-disturbance buffer of sufficient size to prevent disturbance would be established around the nests to prevent accidental encroachment by vehicles, equipment, or personnel.

The potential for treatment activities including maintenance treatments to result in adverse effects on the western snowy plover was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 158-161). Potential impacts to western snowy plovers are within the scope of the PEIR because effects to western snowy plovers 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. Based on the implementation of SPR BIO-1 through SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-5, Mitigation Measures BIO-2a, BIO-2b, BIO-3a, and consistency with the PEIR, impacts to western snowy plover or other special-status wildlife within the ground-nesting life history group is reduced to less than significant. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-Status Burrowing or Denning Wildlife Known to Occur within the Project Area:

The following section outlines one special-status burrowing or denning wildlife species that is known to occur within the project area.

The proposed manual, mechanical, targeted herbicide application, and prescribed burning treatments have the potential to result in direct or indirect adverse effects on special-status burrowing or denning wildlife through temporary impacts to habitats. The potential for treatment activities to result in adverse effects to special-status burrowing or denning wildlife was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 161-164).

To minimize impacts to special-status burrowing or denning wildlife, the following SPRs are integrated into the treatment design: SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. As stated in the PEIR, the implementation of these SPRs would minimize impacts, however, treatment activities could still result in direct or indirect adverse effects to special-status burrowing or denning wildlife species if these species and their habitat are not sufficiently avoided after identification and during the implementation of the SPRs.

Consistent with the PEIR, implementation of the SPRs reduces the likelihood of adverse impacts to special-status burrowing or denning wildlife species, although, impacts would remain potentially significant and unavoidable. However, after the implementation of Mitigation Measures BIO-2a, BIO-2b, and BIO-3a, all impacts to special-status burrowing or denning special-status species are reduced to less than significant. Species-specific information and additional avoidance measures are outlined in the section below for the one burrowing or denning species known to occur within the project area.

Mountain lion

Mountain lion (*Puma concolor*) is a CDFW candidate endangered species with documented occurrences throughout the Santa Cruz Mountains. Mountain lions have a tan coat with a white cream underside with males ranging from 6 to 8 feet in total length and females ranging from 5 to 7 feet. Mountain lions prefer dense vegetative areas within mountain ranges of conifer forests, scrub and oak woodlands, and arid communities. Mountain lions are opportunistic hunters, primarily feeding on deer and small mammals. Although CNDDB had no documented occurrences within the project area or within the CNDDB search area, local knowledge of the project area indicates that this species is known to occur. Initial and maintenance treatments will be conducted within suitable year-round foraging habitat, which could result in impacts to this species; the potential for treatment activities, including maintenance treatments, to result in adverse effects on burrowing or denning special-status wildlife, including mountain lions, was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 161-164).

Mountain lions are most active during dusk and dawn hours, when manual, mechanical, targeted herbicide application, and prescribed burn ignitions are unlikely to occur. However, broadcast burn operations have the potential to occur at any time. In addition, mountain lions are likely to avoid areas where treatments are actively being performed due to the increase in noise and human presence. While targeted herbicide treatments are not expected to disturb mountain lions or mountain lion dens, they have the potential for adverse effects due to accidental exposure to chemicals. The potential for adverse effects from targeted herbicide treatments will be avoided and minimized by implementation of SPR HAZ-5, HAZ-6, and HYD-5.

In accordance with SPR BIO-10, the project proponent will assume presence of mountain lion, and Mitigation Measure BIO-2b will be required. Pursuant to Mitigation Measure BIO-2b, the project proponent will consult with CDFW to advise how habitat function for mountain lion will be maintained following implementation of initial and maintenance treatments. Any mountain lion sightings or detections of dens or rendezvous sites will be immediately reported to CDFW. A 300-foot no-operations buffer will be established around active den sites. Operations shall not commence within the no-operations buffer until appropriate buffers and mitigation measures can be determined and approved by CDFW.

Per Mitigation Measure BIO-3a, habitat function for mountain lion will be maintained by the project because treatment activities will retain the majority of the dominant canopy for all forested plant communities. Additionally, portions of native shrub habitats, which provide cover for hunting and habitat and forage for prey species will be maintained or improved.

The potential for treatment activities including maintenance treatments to result in adverse effects on the mountain lion was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 161-164). Potential impacts to mountain lions are within the scope of the PEIR because impacts to mountain lions 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. Based on the implementation of SPR BIO-1 through SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-5, Mitigation Measures BIO-2b, BIO-3a, and consistency with the PEIR, impacts to mountain lions or other special-status wildlife within the burrowing or denning wildlife life history group is reduced to less than significant. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-Status Fish and Aquatic Invertebrates Known to Occur within the Project Area:

The following section outlines the three special-status fish and aquatic invertebrate species that are known to occur within the project area. The project area contains suitable habitat for various fish and aquatic invertebrates in the form of creeks, streams, lagoons, estuaries, and freshwater tributaries.

The proposed manual, mechanical, targeted herbicide application, and prescribed burning treatments have the potential to result in direct or indirect adverse effects on special status fish and aquatic invertebrates through temporary impacts to habitat. The potential for treatment activities to result in adverse effects to special-status fish and aquatic invertebrates was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 178-182).

To minimize impacts to special-status status fish and aquatic invertebrates, the following SPRs are integrated into treatment design: SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-8, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, and SPR HYD-5. As stated in the PEIR, the implementation of these SPRs would minimize impacts, however, treatment activities could still result in direct or indirect adverse effects to special-status fish and aquatic invertebrates if these species are their habitat are not sufficiently avoided after identification during the implementation of the SPRs.

Consistent with the PEIR, implementation of the SPRs reduce the likelihood of adverse impacts to special-status fish and aquatic invertebrates, although, impacts would remain potentially significant and unavoidable. However, after the implementation of Mitigation Measures BIO-2a, BIO-3a, BIO-3c, and BIO-4, all impacts to special-status fish and aquatic invertebrates are reduced to less than significant. Species-specific information and additional avoidance measures are outlined the section below for the three fish species known to occur within the project area.

Coho Salmon – central California coast, Steelhead – central California coast, and Tidewater goby

Coho salmon – central California coast (*Oncorhynchus kisutch pop. 4)* is a federally and state endangered species. These salmon spend approximately the first half of their life cycle rearing and feeding in streams and small freshwater tributaries. This species requires cold, clean freshwater streams to lay their eggs, along with side channels and floodplains where young fish can find food and hide from predators. The remainder of their life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean. Salmon are generally 22 to 28 inches in length. Adults are characteristically dark red on the sides, green on the head and back, and gray to black on their belly. This species has an occurrence recorded along Waddell Creek and Skyline-To-The-Sea Trail within the project area.

Steelhead – central California coast (*Onchorhynchus mykiss irideus pop. 8)* is a federally threatened species along the central coast of California. This is an anadromous fish species that occurs in freshwater Pacific coast streams. Steelhead migrate to marine waters once they near maturity, then return to freshwater streams for spawning. High water velocities and low water depth can impede this species' capability to migrate. Steelhead range from 14 to 26 inches in length and appear primarily silver with pink cheeks, green backs, and black spots along the trail and fins. This species has occurrences recorded along Waddell Creek and Gazos Creek within the project area.

Tidewater goby (*Eucyclogobius newberryi*) is a federally endangered fish species. This species resides in lagoons, estuaries, marshes, and freshwater tributaries. Although these waters are commonly brackish, gobies are mobile in navigating upstream into freshwater or downstream into waters with higher salinity. Inidividuals ranged from 0.6-2 inches in length and are semi-translucent gray, brown, or olive colored. They have two large distinct pectoral fins. This species is known to occur in the project area in the Waddell Creek Lagoon.

Per SPR BIO-1, if it is determined that adverse effects on special-status fish can be clearly avoided by physically avoiding habitat for these species, then mitigation would not be required. Treatments

would not occur within aquatic habitat for these species. WLPZs ranging from 50 to 150 feet adjacent to all Class I and Class II streams within the treatment areas would be implemented per SPR HYD-4, which prohibits operating heavy equipment, crossing watercourses unless dry, equipment fueling, placement of burn piles, and fire ignition within the WLPZ. Habitat function for special-status fish would be maintained because treatment activities and maintenance treatments would not occur within aquatic habitat. Furthermore, treatments within WLPZs adjacent to aquatic habitat would be limited pursuant to SPR HYD-4, which requires retention of at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation. This riparian vegetation standard would maintain stream shading and avoid increases in water temperature. In addition, SPR HYD-1 requires compliance with water quality regulations.

The potential for treatment activities including maintenance treatments to result in adverse effects to coho salmon, steelhead, or tidewater goby was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 178-182). Potential impacts to fish and aquatic invertebrates are within the scope of the PEIR because impacts to fish and aquatic invertebrates 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. Based on the implementation of SPR BIO-1 through SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-1, SPR HYD-4, SPR HYD-5, Mitigation Measures BIO-2a, BIO-3a, BIO-3c, BIO-4, and consistency with the PEIR, impacts to fish or other special-status wildlife within the fish and aquatic invertebrates life history group is reduced to less than significant. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-Status Insects and Other Terrestrial Invertebrates Known to Occur within the Project Area:
The following section outlines the special-status insect species known to occur within the project area.

The proposed manual, mechanical, targeted herbicide application, and prescribed burning treatments have the potential to result in direct or indirect adverse effects on special status insects and terrestrial invertebrates through temporary impacts to habitat. The potential for treatment activities to result in adverse effects to special-status insects and other terrestrial invertebrates was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 164-171).

To minimize impacts to special-status status insects and other terrestrial invertebrates, the following SPRs are integrated into treatment design: SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-8, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. As stated in the PEIR, the implementation of these SPRs would minimize impacts, however, treatment activities could still result in direct or indirect adverse effects to special-status insects and terrestrial invertebrates if these species are their habitat are not sufficiently avoided after identification during the implementation of the SPRs.

Consistent with the PEIR, implementation of the SPRs reduce the likelihood of adverse impacts to special-status insects and terrestrial invertebrates, although, impacts would remain potentially significant and unavoidable. However, after the implementation of Mitigation Measures BIO-2a, BIO-2b, BIO-2e, BIO-2f, BIO-2g, BIO-3a, all impacts to special-status insects and terrestrial invertebrates are reduced to less than significant.

An exception to this is the western bumble bee (*Bombus occidentalis*), which is known to occur within the project area. Despite the implementation of SPRs applicable to this species and Mitigation Measure BIO-2g, potential impacts to the western bumble bee remain potentially significant and unavoidable due to uncertainties in life history characteristics, behaviors, difficulty detecting overwintering, and determining occurrences (CalVTP Final PEIR Volume II Section 3.6.3, page 171). This is a determination consistent with the PEIR and does not constitute a substantially more severe impact than what was covered in the PEIR.

Species-specific information and additional avoidance measures are outlined in the section below for the western bumble bee.

Western Bumble Bee

Western bumble bee (*Bombus occidentalis*) is listed as a state candidate species. Western bumble bees are associated with a wide range of flowering plants and crops within coniferous, deciduous, and mixed-woodland forests, and wet and dry meadows. This species has a known occurrence recorded within Big Basin Redwoods State Park adjacent to Hihn Hammond Road.

Proposed treatments including manual, mechanical, prescribed pile and broadcast burning, and targeted herbicide treatments have the potential to cause adverse effects to western bumble bee either through the disruption of suitable habitat or through physically killing or disrupting ground-nesting colonies or larva incapable of flight, as analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 164-171). Pursuant to SPR BIO-10, focused surveys for western bumble bees in wet meadow, forest meadow, riparian, grassland, or coastal scrub habitat containing sufficient floral resources within the range of the species will be implemented prior to treatments.

Pursuant to Mitigation Measure BIO-2g for special-status bumble bees, the project proponent will implement the following measures as feasible if western bumble bees are determined to present:

- Prescribed broadcast burning within occupied habitat or suitable habitat for western bumble bees shall occur from October through February, to avoid the bumble bee flight season.
- Treatment areas in occupied or suitable habitat will be divided into a sufficient number of treatment units such that the entirety of the habitat is not treated within the same year; the objective of this measure is to provide refuge for special-status bumble bees during treatment activities and temporary retention of suitable floral resources proximate to the treatment area.
- Treatments will be conducted in a patchy pattern to the extent feasible in occupied or suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of unburned floral resources for special-status bumble bees within the treatment area).
- Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March through September).

Additionally, the understory retention requirements described under Section 2.1 Treatment Prescription in forested environments shall provide additional patchy patterns of vegetation retained to support this species temporarily while the understory regenerates, maintaining habitat function per Mitigation Measure BIO-2a.

Furthermore, in CDFW's 2023 Survey Consideration for CESA Candidate Bumble Bee Species document, if surveys, such as those performed under SPR BIO-10, determine that suitable nesting, foraging, or overwintering habitat is present within the project area, then it is recommended that a biological monitor be onsite during vegetation and ground disturbing activities that occur during the queen flight period, gyne flight period, and colony active period; according to Table 1 of the CDFW document, western bumble bee's queen flight season is February-March, colony active period is April-September, and gyne flight season is October-November (CDFW, 2023). This recommendation will be implemented if a qualified biologist or RPF determines that ground disturbing treatment activities cannot feasibly avoid suitable habitat (i.e., open grassland, shrublands, and wet meadows) during the queen and gyne flight periods and colony active period;

this project is designed to have ground-disturbing activities predominately in forested environments, which may avoid ideal suitable habitat.

Additional site-specific measures to avoid take of this species may be developed following determinations from the implementation of SPR BIO-10.

The potential for treatment activities including maintenance treatments to result in adverse effects on western bumble bees was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 164-171). Potential impacts to western bumble bees are within the scope of the PEIR because effects to western bumble bees 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. Furthermore, habitat function for western bumble bees would be maintained because treatment activities and maintenance treatments are designed to occur in a patchy manner that would maintain habitat for this species. Applicable SPRs and Mitigation Measures for the western bumble bee include SPR BIO-1 through SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-5, Mitigation Measures BIO-2a, BIO-2g, and BIO-3a. Despite the implementation of these SPRs and Mitigation Measures, potential impacts to the western bumble bee remain potentially significant and unavoidable due to uncertainties in life history characteristics, behaviors, difficulty detecting overwintering, and determining occurrences (CalVTP Final PEIR Volume II Section 3.6.3, page 171). This is a determination consistent with the PEIR and does not constitute a substantially more severe impact than what was covered in the PEIR.

Special-Status Wildlife with Potential to Occur within the Project Area:

All other special-status wildlife species with potential to occur or with suitable habitat present within the project area, as listed in *Table 6*, are grouped into the following life history groupings: tree and cavity nesting wildlife, shrub-nesting wildlife, burrowing or denning wildlife, insects and other terrestrial invertebrates, and bats. Another special-status species that has potential to occur within the project area is the monarch butterfly, within the insects and other terrestrial invertebrates life history group; since this species is not known to occur within the project area, the species-specific avoidance measures are included in this section.

To minimize impacts to special-status species with potential to occur or with suitable habitat within the project area, the following SPRs are integrated into the project design and apply dependent on the life history grouping, as identified in the PEIR Table 3.6-33: SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, SPR BIO-8, SPR-BIO-10, SPR HAZ-5, SPR HAZ-6, and SPR HYD-5. Additionally, Mitigation Measure BIO-2a, Mitigation Measure BIO-2b, Mitigation Measure BIO-2e, and Mitigation Measure BIO-3a will be implemented on a species-specific basis.

In accordance with SPR BIO-1, a reconnaissance-level survey will be performed prior to operations as well as periodically throughout the lifespan of this PSA/Addendum. If it is determined that other special-status wildlife species may occur within the treatment area and that adverse effects may occur, then SPR BIO-10 requires focused surveys for the species. If focused surveys locate any special-status species or nursery sites (e.g., bat maternity roosts, monarch overwintering sites, etc.), the project proponent will institute an appropriate buffer specific to the special-status species found, where manual and mechanical operations would not occur; this buffer may be increased or decreased by a qualified biologist to appropriately protect these species. Based on the implementation of SPR BIO-1, SPR BIO-10, other applicable SPRs and Mitigation Measures, and consistency with the PEIR, impacts to special-status wildlife species that have the potential to occur within the project area is reduced to less than significant.

Monarch butterfly

The monarch butterfly is a federal candidate species that utilizes blue gum eucalyptus (*Eucalyptus globulus)*, Monterey pines (*Pinus radiata)*, Monterey cypress (*Cupressus macrocarpa)*, and coast redwood (*Sequoia sempervirens)* for overwintering habitat and has a long-distance annual migration. The western population migrates from coastal California, where they overwinter, to Arizona and Idaho, where they breed. As caterpillars, monarchs are heavily reliant on milkweed plants as a larval host plant, which provides toxins that protect them from predation. Mature monarchs feed on nectar from a variety of flowers. Monarch butterflies display orange and black patterns decorated with white spots. The CNDDB search did not yield recorded occurrences of this species within the project area. Additionally, the project area does not contain suitable overwintering habitat but may contain native nectar host plants for the monarch butterfly; recorded occurrences within the CNDDB search area but outside of the project area are along State Highway 1 and Green Oaks Creek.

If SPR BIO-10 determines presence for overwintering sites within the project area or if presence is assumed, then the Xerces Society for Invertebrate Conservation (Xerces Society) or a qualified biologist should be consulted to develop site-specific avoidance measures to maintain existing habitat function and retention of existing nectar sources; if this species is officially listed under ESA when, or if, surveys determine presence, then USFWS will be notified with the proposed avoidance measures.

As previously mentioned, the project area does not contain suitable overwintering habitat nor milkweed, however, if overwintering sites are discovered, then the following plants are recommended for retention in open areas if time and resources allow it (Table 8). Botanical surveys conducted prior to treatments will survey for the species listed below in *Table 8* and flag them appropriately for retention.

Table 8: Native Nectar Plant Species Recommended for Retention Around Overwintering Sites

Native Nectar Plant Species	Likelihood of Being Within the Project Area
Wax myrtle (*Morella californica*)	*Likely to occur within the project area*
Toyon (*Heteromeles arbutifolia*)	*Likely to occur within the project area*
Coffee berry (*Frangula californica*)	*Likely to occur within the project area*
Seaside fleabane (*Erigeron glaucus*)	*Likely to occur within the project area*
Coyote bush (*Baccharis pilularis)*	*Likely to occur within the project area*
Sage spp. such as black or hummingbird sage	*Likely to occur within the project area*
Mule fat (*Baccharis salicifolia*)	*Unlikely to occur within the project area*
Local Manzanita spp.	*Likely to occur within the project area*
Ericameria spp. such as rabbitbrush, goldenbush, & mock heather	*Likely to occur within the project area*

Per Mitigation Measure BIO-2e, the project is designed to account for the retention of host plant species for special-status butterflies; this Mitigation Measure is consistent with the native nectar plant recommendations listed above.

Project activities are likely to increase nectar sources for monarchs by temporarily creating openings that will be colonized by native herbaceous species. In alignment with the Priority 1 discussion in the *Xerces' Priority Action Zones in California for Recovering Western Monarchs*,

State Parks has no intention of artificially establishing a population of milkweed within the footprint of the project since the project area does not currently and has not historically supported a native population of milkweed (Xerces Society, 2024); the reintroduction of milkweed would conflict with multiple policies of California State Parks.

The potential for treatment activities including maintenance treatments to result in adverse effects on monarch butterflies was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 164-171). Potential impacts to monarch butterflies are within the scope of the PEIR because effects to monarch butterflies 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. Furthermore, habitat function for monarch butterflies would be maintained because treatment activities and maintenance treatments would implement site-specific avoidance measures and native nectar plant retention. Based on the implementation of SPR BIO-1 through SPR BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR HYD-5, Mitigation Measures BIO-2a, BIO-2e, BIO-3a, and consistency with the PEIR, impacts to monarch butterflies or other special-status wildlife within the insects and other terrestrial invertebrates life history group is reduced to less than significant. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Conclusion – Impact BIO-2

The potential for adverse effects to special-status wildlife species is within the scope of the activities and impacts addressed in the PEIR because the activities and level of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. Based on the implementation of the SPR BIO-1 through BIO-5, SPR BIO-10, SPR HAZ-5, SPR HAZ-6, SPR, HYD-4, SPR HYD-5, Mitigation Measures BIO-2a, BIO-2b, BIO-2c (if applicable), BIO-2d, BIO-2e, BIO-2f, BIO-2g, BIO-3a, BIO-3b (if applicable), BIO-3c (if applicable), BIO-4, and consistency with the PEIR, this impact is reduced to less than significant, except for the western bumble bee, which remains potentially significant and unavoidable. This determination is consistent with the PEIR and would not constitute a substantially more severe impact than what was covered in the PEIR.

Addendum – Impact BIO-2

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the potential for special-status wildlife species to be present is essentially the same within and outside the treatable landscape.

In addition, as described under Section 1.2.3 Proposed Project Revisions, State Parks proposes to revise SPR HYD-4, which applies to this impact. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of manual, mechanical, prescribed pile burning, and targeted herbicide treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation. For the reasons described, proposed revisions to SPR HYD-4 would not result in a substantially more severe significant effect related to special-status wildlife species than what was covered in the PEIR. This SPR does not apply to the insects and other terrestrial invertebrates life history grouping, which includes special-status bumble bees; therefore, revisions to SPR HYD-4 will not impact special-status bumble bees.

Therefore, the potential impact to special-status wildlife species is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact BIO-3

Initial and maintenance treatments include mechanical, manual, prescribed broadcast and pile burning treatments, as well as targeted herbicide treatments, which have the potential to result in direct or indirect adverse effects to sensitive habitats, including designated sensitive natural communities, oak woodlands, and riparian habitats.

Through cross-referencing the CalVTP PEIR Table 3.6-3 (Vegetation and Habitat Types within the Treatable Landscape for the Central California Coast Ecological Section) and the vegetation alliances within the project area, the project boundary includes the following California Wildlife Habitat Relationship (CWHR) classifications: redwood, montane hardwood, Douglas-fir, montane hardwood-conifer, chamise-redshank chaparral, coastal oak woodland, mixed chaparral, coastal scrub, closed-cone pine-cypress, valley foothill riparian, annual grassland, and perennial grassland, (Table 7) (Tukman Geospatial, 2019 & 2020). According to a data review of the Santa Cruz Santa Clara Fine Scale Vegetation Map and Landscape Database and the San Mateo Fine Scale Vegetation Map Feature Service, which rely on aerial imagery, light detection and ranging, and field verification, sensitive natural communities (i.e., alliances with a rarity rank of S1, S2, or S3) located within the treatment boundaries include: tanoak alliance (*Notholithocarpus densiflorus* Alliance), redwood alliance (*Sequoia sempervirens* Alliance), Douglas-fir-tanoak association (*Pseudotsuga menziesii – Notholithocarpus densiflorus / Vaccinium ovatum* Association), California bay forest and woodland (*Umbellularia californica* Mapping Unit), interior live oak – shreve oak woodland and forest (*Quercus wislizeni – Quercus parvula* (tree) Alliance), glossy leaf manzanita – golden chinquapin chaparral (*Arctostaphylos (nummularia, sensitiva) – Chrysolepis chrysophylla* Alliance), bigleaf maple forest and woodland (*Acer macrophyllum* Mapping Unit), brittle leaf – wooly leaf manzanita chaparral alliance (*Arctostaphylos (crustacea, tomentosa)* Alliance), California buckeye alliance (*Aesculus californica* Alliance), Monterey cypress association (*Hesperocyparis macrocarpa* Ruderal Semi-Natural Association), Bishop and Monterey pine alliance (*Pinus muricata – Pinus radiata* Alliance), and Black cottonwood alliance (*Populus trichocarpa* Alliance), as defined in the Manual of California Vegetation as well as chaparral and coastal scrub communities, riparian communities, and coastal oak woodlands as described in the PEIR (CalVTP Final PEIR Volume II Section 3.6.1, pages 27 and 28).

The mixed chaparral CWHR located within the project area contains two sensitive natural communities, including glossy leaf manzanita – golden chinquapin chaparral and brittle leaf – wooly leaf manzanita chaparral alliance. SPR BIO-5 requires that treatments implemented in chaparral will be designed to avoid type conversion of chaparral vegetation, to maintain chaparral habitat function, and retain a minimum of 35% of existing chaparral, including a mix of mature chaparral and middle to older aged shrubs to maintain heterogeneity to the extent feasible; per State Parks vegetation management statement, State Parks lands will target retaining the historic footprint of chaparral where feasible. Within the ecological restoration treatment type, treatments would not occur within the natural fire return interval, as defined on an alliance level, unless there is substantial evidence to support that treatments will improve habitat function(e.g. implementing manual treatments to remove conifers encroaching into and displacing chaparral habitat). All treatment prescriptions within chaparral vegetation must consider the natural fire return interval and condition of the alliances within the treatment area.

Mixed chaparral stands throughout the park, all of which experienced high intensity wildfire in 2020, will be allowedto reestablish naturally post-fire. In instances where conifers are encroaching into and replacing

stands of chaparral, treatments will focus on removal of encroaching conifers to maintain the extent of chaparral communities. These stands of chaparral will ideally be maintained in the future through prescribed fire as determined necessary by California State Park biologists and botanists. Chaparral exists adjacent to redwood stands within prescribed burn plots. These stands, to the extent feasible, will not be actively ignited during prescribed burns that occur at an interval more frequent than that required to maintain them as chaparral. Type conversion of chaparral and coastal sage scrub would not occur at this scale, as required by SPR BIO-5.

The project area also contains riparian habitat adjacent to various watercourses. SPR HYD-4 will be implemented to establish appropriate WLPZ buffers located within 300 feet of mechanical, manual, prescribed pile burning, and targeted herbicide application treatments. Additionally, SPR BIO-4 requires that treatments within riparian habitats retain a minimum of 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation.

To minimize substantially affecting riparian habitat or other sensitive natural communities and oak woodlands, the following SPRs are integrated into the project design: review data and conduct reconnaissance surveys to identify potential sensitive biological resources (SPR BIO-1), conduct biological awareness training for all crew members and contractors prior to operations (SPR BIO-2), conduct surveys of sensitive natural communities and habitats if adverse effects cannot be avoided (SPR BIO-3), design treatments to avoid loss of riparian habitat function and prevent vegetation removal that could reduce stream shading (SPR BIO-4), design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present (SPR BIO-5), prevent the spread of pathogens (SPR BIO-6), prevent the spread of invasive plants, noxious weeds, and invasive wildlife (SPR BIO-9), identify and protect WLPZs with appropriate buffers (SPR HYD-4), and service and refuel equipment outside of WLPZs and wet areas (SPR HYD-5). Additionally, the PEIR determined that Mitigation Measures will be required to reduce impacts to less than significant if treatments will occur within sensitive natural communities; the majority of the project area occurs in vegetation types that are considered sensitive natural communities, therefore Mitigation Measure BIO-3a will be implemented. Mitigation Measure Bio-3a requires that treatments are designed to avoid the loss of sensitive natural communities and oak woodlands (Mitigation Measure BIO-3a). Treatments are designed to maintain characteristics of the sensitive natural communities, such as through the retention of the dominant canopy and species composition. Through these SPRs and Mitigation Measures, the presence of sensitive natural communities will be determined, and substantial impacts will be avoided.

The potential for treatment activities to result in adverse effects to riparian habitat or other sensitive natural community through direct loss or degradation that leads to loss of habitat function was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 187-192). The potential for adverse effects to riparian habitats and other sensitive natural communities is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and level of disturbance as a result of treatment activities are consistent with those analyzed in the PEIR. Based on the implementation of the SPR BIO-1 through BIO-6, SPR BIO-9, SPR HYD-4, SPR HYD-5, Mitigation Measures BIO-3a, BIO-3b, BIO-3c, and consistency with the PEIR, this impact is reduced to less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe impact than what was covered in the PEIR.

Coastal Zone

Due to the project partially occurring within the coastal zone (Attachment XX, Map 1), SPR BIO-8 would apply which requires consultation with the California Coastal Commission (CCC). Efforts have been made between the CCC, San Mateo Resource Conservation District, Resource Conservation District of Santa

Cruz County, and other similar entities to develop Public Works Plans (PWPs), which establish a set of standards for CalVTP projects occurring within the coastal zone of San Mateo and Santa Cruz Counties. A DRAFT project description and introduction for the Coastal Santa Cruz Mountains, State Parks Forest Heath Initiative PSA was sent to the CCC on January 31, 2025, for review. On April 24, 2025, the CCC met with staff from CA State Parks and other project partners to discuss the project description, treatment specifications, and sensitive resources. A full DRAFT PSA/Addendum was shared with the CCC for review on May 2, 2025, and the CCC met with staff from CA State Parks to discuss and address their comments on June 4, 2025. Furthermore, a Coastal Vegetation Treatment Standards (CVTS) document has been filled out for this project and was submitted to the CCC on May 2, 2025 with the PSA (Attachment E).

As mentioned previously, within San Mateo and Santa Cruz Counties a significant portion of the Coastal Zone has been identified as ESHA by the CCC. The basis of this project is to conduct ecologically restorative treatments that promote the persistence and resiliency of the various sensitive natural habitat within the project area through a myriad of protection, conservation, and avoidance measures.

The vegetation removal hierarchy, as outlined in the attached CVTS document, is as follows: (1) thinning and removal of dead, dying, and diseased foliage (except select snags and logs which will be retained as 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 (Attachment D). The treatment activities will reduce potential ignition sources, improve ecosystem health and vigor, and promote a more resilient forest. Based on the treatment prescription, determination of qualified RPFs and botanists, survey protocol and preoperational meetings, and the implementation of the applicable SPRs and mitigation measures, it is likely that any impact to riparian habitat or other sensitive natural communities would be less than significant.

Addendum – Impact BIO-3

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the potential to cause substantial impacts to riparian habitat or other sensitive natural communities is essentially the same within and outside the treatable landscape.

In addition, as described under Section 1.2.3, “Proposed Project Revisions,” State Parks proposes to revise SPR HYD-4, which applies to this impact. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of manual, mechanical, prescribed pile burning, and targeted herbicide treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation. For the reasons described, proposed revisions to SPR HYD-4 would not result in a substantially more severe significant effect related to causing substantial impacts to riparian habitat or other sensitive natural communities than what was covered in the PEIR.

Therefore, the potential impact to riparian habitat or other sensitive natural communities is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact BIO-4

Initial and maintenance treatments, including manual, mechanical, prescribed fire, and targeted herbicide treatments, could result in direct or indirect adverse effects on state or federally protected wetlands due to the potential to remove wetland vegetation and alter wetland hydrology or topography resulting in loss or

degradation of wetland function. The potential for treatment activities to result in adverse affects to wetlands was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 192-193).

Wetlands that fall within the treatment areas will be identified via SPR BIO-1 and protected appropriately via SPR HYD-4. To minimize and significantly reduce the potential to substantially affect state or federally protected wetlands within the project area, the following SPRs are integrated into the project design: review data and conduct reconnaissance surveys to identify potential sensitive biological resources (SPR BIO-1), comply with water quality regulations and waste discharge requirements (WDR) (SPR HYD-1), and identify and protect WLPZs with appropriate buffers (SPR HYD-4). Additional SPRs, such as SPR BIO-2, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, indirectly support the avoidance of substantially affecting state or federally protected wetlands within the project area and are integrated into the project design for other impact analyses.

Additionally, Mitigation Measure BIO-4 will apply to all treatment activities, in which a qualified RPF or biologist will delineate the boundaries of wetland features and establish no-disturbance buffers with high-visibility flagging, or other demarcation. The application of Mitigation Measure BIO-4 will reduce potentially significant impacts on state and federally protected wetlands.

The potential for treatment activities to result in adverse effects on state or federally protected wetlands was examined in the PEIR. This impact on wetlands is within the scope of the PEIR because the implementation of treatment activities and the resulting levels of disturbance are consistent with those analyzed in the PEIR. Based on the implementation of SPR BIO-1, SPR HYD-1, SPR HYD-4, and Mitigation Measure BIO-4, this impact is less than significant and would not constitute a substantially more severe impact than what was covered in the PEIR.

Addendum – Impact BIO-4

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the potential for wetlands to be present is essentially the same within and outside the treatable landscape.

In addition, as described under Section 1.2.3 Proposed Project Revisions, State Parks proposes to revise SPR HYD-4, which applies to this impact. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of manual, mechanical, prescribed pile burning, and targeted herbicide treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation. For the reasons described, proposed revisions to SPR HYD-4 would not result in a substantially more severe significant effect related to wetlands than what was covered in the PEIR.

Therefore, the potential impact to wetlands is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact BIO-5

Initial and maintenance treatments, including manual, mechanical, targeted herbicide application, and prescribed fire, could result in direct or indirect adverse effects on wildlife movement corridors and nurseries.

Pursuant to SPR BIO-1, biological resource review and project-specific survey indicate that the project area contains suitable habitat for wildlife nurseries and contains connectivity areas.

To minimize substantial interference with wildlife movement corridors or impede the use of nurseries, the following SPRs are integrated into the project design: review data and conduct reconnaissance surveys to identify potential sensitive biological resources (SPR BIO-1), design treatments to avoid loss of riparian habitat function and prevent vegetation removal that could reduce stream shading (SPR BIO-4), design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present (SPR BIO-5), conduct focused protocol-level surveys if suitable habitat for special-status wildlife species or nurseries of any wildlife species is present and cannot be avoided (SPR BIO-10), comply with water quality regulations and WDR (SPR HYD-1), and identify and protect WLPZs with appropriate buffers (SPR HYD-4). As evaluated in the PEIR, despite the implementation of the applicable SPRs, important nursery sites could be removed, degraded, or disturbed by treatment activities including prescribed broadcast burning or manual and mechanical treatments, including removal of mid-range diameter Douglas-fir trees. For this reason, Mitigation Measure BIO-5 will be implemented to retain and avoid nursery habitat through the establishment of buffers when necessary.

The potential for treatment activities to result in adverse effects to wildlife movement corridors and nurseries was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 193-197). The potential for adverse effects to wildlife movement corridors and nurseries is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and level of disturbance as a result of the treatment activities are consistent with those analyzed in the PEIR.

Based on the implementation of SPR BIO-1, SPR BIO-4, SPR BIO-5, SPR BIO-10, SPR HYD 1, SPR HYD-4, and the Mitigation Measure BIO-5, any impact that causes substantial interference with wildlife movement corridors or impedes the use of nurseries is determined to be less than significant and would not constitute a substantially more severe impact than what was covered in the PEIR.

Addendum – Impact BIO-5

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the potential for nurseries or wildlife corridors to be present is essentially the same within and outside the treatable landscape.

In addition, as described under Section 1.2.3 Proposed Project Revisions, State Parks proposes to revise SPR HYD-4, which applies to this impact. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of manual, mechanical, prescribed pile burning, and targeted herbicide treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation. For the reasons described, proposed revisions to SPR HYD-4 would not result in a substantially more severe significant effect related to nurseries and wildlife corridors than what was covered in the PEIR.

Therefore, the potential impact to nurseries and wildlife corridors is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact BIO-6

Initial treatment and maintenance treatments, including manual, mechanical, prescribed burning, and targeted herbicide treatment activities, could result in direct or indirect adverse effects resulting in reduction of habitat or abundance of common wildlife, including nesting birds. Treatment activities during the nesting bird season (February 1st - August 31st) could potentially result in abandonment or loss of eggs or chicks due to auditory and visual stimulus.

The project area contains suitable habitat for common wildlife and nesting birds; to minimize substantial reductions to habitat or abundance of common wildlife, including nesting birds, the following SPRs are integrated into the project design: review data and conduct reconnaissance surveys to identify potential sensitive biological resources (SPR BIO-1), conduct biological awareness training for all crew members and contractors prior to operations (SPR BIO-2), conduct surveys of sensitive natural communities and habitats if adverse effects cannot be avoided (SPR BIO-3), design treatments to avoid loss of riparian habitat function and prevent vegetation removal that could reduce stream shading (SPR BIO-4), design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present (SPR BIO-5), and protect common nesting birds, including raptors, through nesting bird surveys and establishing appropriate avoidance buffers (SPR BIO-12).

Nesting Bird Protocol

Nesting bird and bat roost surveys will be required from February 1st to August 31st and shall be conducted within 7 days of any manual or mechanical operations in treatment areas by State Parks or their supervised designee to determine if nesting activity is occurring. If no active bird nests are observed during focused surveys, then additional measures will not be required. If active nests of common birds or raptors are observed during focused surveys, feasible impact avoidance strategies will be implemented to avoid disturbance to the nest, as described in SPR BIO-12. Feasible impact avoidance strategies include establishing appropriate buffers, modifying treatments to avoid disturbance, and deferring treatment until the nest is no longer active as determined by a qualified RPF or biologist. Buffers will be based upon a species' life history. Buffers will typically be between 50 and 300 feet for non-raptors and up to 500 feet or greater for raptors; based on the qualified RPF or biologists' analysis that the buffer is appropriate, buffer size may increase or decrease while still maintaining protection for the nesting bird species.

The potential for treatment activities to result in adverse effects to habitat and abundance of wildlife was addressed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, pages 197-199). The potential for adverse effects to common wildlife, including nesting birds, is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and level of disturbance are consistent with those analyzed in the PEIR.

Based on the survey protocol and the implementation of SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR BIO-5, and SPR BIO-12, any impact to the loss of habitat or abundance of wildlife, including nesting birds, will be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe impact than what was covered in the PEIR.

Addendum – Impact BIO-6

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the potential for habitat for common wildlife, including nesting birds, to be present is essentially the same within and outside the treatable landscape. Therefore, the potential impact on habitat and abundance of common wildlife, including nesting birds, is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact BIO-7

The initial and maintenance treatments proposed in this project overlap with Santa Cruz and San Mateo counties. The project was designed, and treatments will be implemented in a manner that is consistent with local policies or ordinances that protect biological resources, per SPR AD-3.

Santa Cruz County Policies and Ordinances:

This section outlines applicable local policies or ordinances that are relevant to biological resources within Santa Cruz County.

- Santa Cruz County Code Section 16.32, "Sensitive Habitat Protection" contains several goals and policies related to biological resources applicable to this project. This code identifies areas of biotic concern and requires a biotic assessment of any activities proposed within these areas. Impacts BIO-1 through BIO-6 of Section 4.5 "Biological Resources" of this PSA/Addendum provides this biotic assessment and outlines SPRs and Mitigation Measures to maintain habitat function of sensitive habitats and prevent loss of sensitive species. Therefore, there will not be a conflict with this ordinance as a result of implementation of treatment activities. Adherence to this code also satisfies the requirements of Project Standard 4 in the Santa Cruz PWP, which requires consistency with Santa Cruz County Code Section 16.32.
- Santa Cruz County Code Section 16.30, "Riparian Corridor and Wetland Protection" contains similar goals related to biological and hydrological resources applicable to this project. This code outlines buffer zones and protection measures for riparian corridors and wetlands within Santa Cruz County that are applicable to this project. The implementation of SPRs BIO-4, GEO-6, HYD-4, and Mitigation Measure BIO-4 will meet or exceed the protection standards outlined in this section of county code, and therefore also comply with the requirements of Project Standard 4 in the Santa Cruz PWP, which requires consistency with Santa Cruz County Code Section 16.40.
- For operations along County-maintained roads, Santa Cruz County Code (SCCC) 9.70.500 (B) Trimming or Removal (2) requires that a permit be obtained prior to tree removal within the right-of-way. State Parks will comply with this code when implementing vegetation treatments alongside County-maintained roads within the PSA/Addendum area. Therefore, there will not be a conflict with this ordinance.

San Mateo County Policies and Ordinances:

This section outlines applicable local policies or ordinances that are relevant to biological resources within San Mateo County.

- San Mateo County Regulations for the Preservation, Protection, Removal and Trimming of Heritage Trees on Public and Private Property Chapter 1 Section 11,052. "Application for and Granting of Permits", requires that a permit be obtained prior to the removal of heritage trees within public property regulated by San Mateo County. Heritage Tree diameter definitions are outlined in Section 11,050. "Definitions (g)"[7] of the regulation. State Parks will obtain a heritage tree permit when implementing vegetation treatments that remove trees that meet the heritage tree definitions by species. Therefore, there will not be a conflict with this ordinance.

[7] Please refer to the ordinance Chapter 1, Section 11,050. Definitions(g) for a list of heritage tree diameters by species, accessible at the following link: https://www.smcgov.org/media/73151/download?inline=

- The San Mateo Significant Tree Ordinance requires that a permit be required prior to removing any significant tree, defined as being 38 inches in circumference (or approximately 12 inches in diameter). Per Section 12,020.1 "Exemptions", No permits shall be required under this Part in the following circumstances:
    - (b) Tree cutting in the Resource Management (RM or RM/CZ), Timberland Production Zone (TPZ or TPZ/CZ), and Planned Agricultural Districts (PAD), except within 100 feet of any County or State scenic road or highway, as identified in the San Mateo County General Plan, provided that any tree cutting in the RM, RM/CZ, or PAD districts shall be subject to Section 12,020.3.
    - (c) Tree cutting to remove a hazard to life and personal property as determined by the Community Development Director, Director of Public Works, or Officer of the California Department of Forestry and Fire Protection.

  According to the County of San Mateo Planning and Building Map Viewer[8], the portions of the PSA/Addendum area that are within San Mateo County are zoned RM – Resource Management District, TPZ – Timberland Production Zone, and PAD – Planned Agricultural District (Planned Agricultural District); therefore, per Section 12,020.3, State Parks must comply with Sections 6324 through 6326.4 of the San Mateo County Zoning Regulations. The CalVTP PEIR is designed to evaluate the resource criteria outlined in the zoning regulations. This project is consistent with the PEIR and, therefore, there will be no conflicts with this ordinance.

The potential for treatment activities to result in conflicts with local policies or ordinances was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3, page 199). The proposed project is within the scope of the PEIR because vegetation treatments implemented under the CalVTP that are subject to local policies or ordinances would be required to comply with any applicable county, city, or other local policies, ordinances, and permitting procedures related to protection of biological resources, per SPR AD-3. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR. Treatment objectives will not conflict with all applicable local policies and ordinances that protect biological resources; therefore, there will be no impact.

Addendum – Impact BIO-7

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the overlap of local policies and ordinances protecting biological resources is essentially the same within and outside the treatable landscape. Treatment objectives will not conflict with all applicable local policies and ordinances that protect biological resources, therefore, there will be no impact, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

[8] The San Mateo County Planning and Building Map Viewer can be accessed at the following link: https://gis.smcgov.org/Html5Viewer/Index.html?configBase=https://gis.smcgov.org/Geocortex/Essentials/REST/sites/PubPlanViewer_14/viewers/HTML52110/virtualdirectory/Resources/Config/Default

Impact BIO-8

The proposed project treatments are located outside of any habitat conservation plans (HCP) or natural community conservation plans (NCCP). Therefore, this project will not conflict with any HCPs or NCCPs and no impact is expected to occur.

PSA Addendum – Impact BIO-8

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the overlap of HCPs and NCCPs is essentially the same within and outside the treatable landscape. The proposed project treatments are located outside of any HCPs or NCCPs outside of the treatable landscape. Therefore, this project will not conflict with any HCPs or NCCPs and no impact is expected to occur, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

New Biological Resource Impacts

The proposed project treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent 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 (CalVTP Final PEIR Volume II Section 3.6.1 and 3.6.2). No changed circumstances are present, therefore, no new impact related to biological resources will occur.

Addendum – New Biological Resource Impacts

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, the existing environmental and regulatory conditions pertinent to biological resources that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No changed circumstances are present, and the inclusion of areas outside the CalVTP treatable landscape and revisions to SPRs and Mitigation Measures will not give rise to any new significant impacts. Therefore, no new impact related to biological resources will occur.

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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	AQ-3 AQ-4 GEO-1 GEO-2 GEO-3 GEO-4 GEO-5 GEO-6 GEO-7 GEO-8 HYD-4	NA	LTS	No	Yes
Impact GEO-2: Increase Risk of Landslide	LTS	Impact GEO-2, pp. 3.7-29 – 3.7-30	Yes	AQ-3 GEO-3 GEO-4 GEO-7 GEO-8	NA	LTS	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

The project area is comprised of a variety of ridgelines running in multiple directions. There are predominant east to west ridgelines in the northern portion of the project area, while the eastern and southern portion of the project area contain ridgelines running north to south. Landslides and slumps are common mass movements in the Santa Cruz Mountains due to the combination of heavy winter rain events and commonly steep slopes. Mass movement events, earthquakes, and other natural forces offset rocks, often exposing rocks and occasionally fossils. Sedimentary rocks such as sandstone, mudstone, and shale comprise most of the Santa Cruz Mountains, however, these rocks are not commonly observed in outcrops because they are subject to weathering. The sedimentary rocks are dated to be between 60 million years and 2 million years old and formed as sediment covered the seafloor, which spanned many areas above sea-level present-day, and was compressed, hardened, and uplifted over time. Below the sedimentary rock lays a much older granitic basement rock which formed about 100 million to 80 million years ago from molten rock miles below the Earth's surface (Santa Cruz Museum, n.d.).

According to Figure 3.7-1 and Table 3.7-1 of the PEIR, this project area is located within the Southern Coastal Ranges geomorphic province, which generally has rugged mountains and valleys that follow a northwest mountain range (CalVTP Final PEIR Volume II Section 3.7.1, pages 2-5). Additionally, Table 3.7-1 of the PEIR indicates that there are various active faults within the Coast Ranges, of which the San Andreas Fault Complex and San Gregorio Fault are nearest to the project area.

More specifically, numerous smaller faults associated with the San Gregorio Fault zone span from northwest to the southeast and cross through the western portion of the project area[9]. The Zayante Fault stretches from east to west across the middle of the project area. The Butano Fault lies just north of portions of the project area, and the Ben Lomond Fault stretches just south of the project area. All of these faults accommodate movement along the San Andreas Fault.

As a result of all the activity along these faults combined with uplifiting movement of rocks over time, the mountain sides are steep throughout the project area.

According to the PEIR Figure 3.7-2 the project area predominantly contains the mollisol soil order, which is characterized by its high accumulation of organic matter and is generally considered deep, fertile, and productive (CalVTP Final PEIR Volume II Section 3.7.1, pages 10-11). BBRSP predominatly features three distinct soil complexes: the Lompico Felton complex, Maymen-Rock outcrop complex, and the Sur-Catelli complex. The Lompico Felton complex, situated on mountain backslopes with slopes ranging from 30-75%, is well-drained, characterized by a loam and clay loam profile resting on bedrock around 37 inches in depth. The Maymen-Rock outcrop complex, a shallow soil on steep slopes, transitions into unweathered bedrock at approximately 14 inches deep and is found along mountains and ridges. The Sur-Catelli complex, positioned on backslopes, is a stony, sandy loam for 35 inches before reaching unweathered bedrock, featuring good drainage on steep slopes. BSP and portions of ANSP contain Butano loam which is found on mountain backslopes (~45-75%). This soil type originates from siliceous shale and exhibits a well-drained profile with high runoff. Hugo and Josephine sandy loam is also prevalent in BSP, which includes sandy loam near the surface and tranisitons to gravelley sandly loam from 8-45 inch depths.

Impact GEO-1

Initial and maintenance treatments include the use of mechanical, manual, prescribed burning, and targeted ground application of herbicides, which could result in varying levels of soil disturbance and could have the potential to increase 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 Section 3.7.3, pages 27-30).

Mechanical treatment areas are designed to allow equipment operations (i.e., mechanical treatments) predominantly on slopes less than 40% where equipment may mobilize between treatment areas on slopes up to 50%. The average slope of the mechanical treatment footprint is approximately 20-30%.

To minimize substantial erosion and loss of topsoil, the following SPRs are integrated into the project design: create a burn plan using California State Parks Prescribed Burn Plan template and minimize soil burn severity (SPR AQ-3), minimize dust during treatment activities including through wetting unpaved, dirt roads to control dust (SPR AQ-4), suspend mechanical operations during heavy precipitation (SPR GEO-1), limit high ground pressure vehicles (SPR GEO-2), stabilize mechanically disturbed soils in treatment areas (SPR GEO-3), conduct pre rainy-season inspections and monitor immediately following the first large rainfall event (SPR GEO-4), drain storm water via water breaks (SPR GEO-5), minimize burn pile size (SPR

[9] https://maps.conservation.ca.gov/cgs/fam//

GEO-6), minimize erosion through the limitation of heavy equipment use on steep slopes (SPR GEO-7), evaluate slopes greater than 50% for unstable areas (SPR GEO-8), and identify and protect WLPZs with appropriate buffers (SPR HYD-4).

The potential impacts associated with substantial erosion and loss of topsoil during treatments are within the scope of the PEIR because treatment activities are consistent with those analyzed in the PEIR. Based on the implementation of the SPR AQ-3, SPR GEO-1 though SPR GEO-8, SPR HYD-4, and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact GEO-1

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the potential for geological conditions to be present is essentially the same within and outside the treatable landscape.

In addition, as described under Section 1.2.3 Proposed Project Revisions, State Parks proposed to revise SPR GEO-1 and SPR HYD-4, both of which are applicable to this impact. SPR GEO-1 is revised to suspend mechanical treatments if: (1) it is raining, (2) soils are saturated, and/or (3) soils are wet enough to be compacted by mechanical activities. This revision is consistent with the original purpose of SPR GEO-1 and the project proponent will be required to suspend mechanical disturbance during heavy precipitation to minimize the risk of soil compaction and soil disturbance. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of the manual, mechanical, targeted herbicide application, and prescribed pile burning treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation, including the potential for erosion. For the reasons described, proposed revisions to SPR GEO-1 and SPR HYD-4 will not result in a substantially more severe significant effect related to erosion or loss of topsoil than what was covered in the PEIR.

Therefore, the potential to result in substantial erosion or the loss of topsoil is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact GEO-2

Initial and maintenance treatments include manual, mechanical, and prescribed burning treatment activities 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 Section 3.7.3, pages 30-31).

As stated above in Impact GEO-1, mechanical treatment areas are designed to allow equipment operations (i.e., mechanical treatments) predominantly on slopes up to 40% where equipment may mobilize between treatment areas on slopes up to 50%. The average slope of the mechanical treatment footprint is approximately 20-30%.

Based on records in the Cooper-Clark and Associates digitized map database, there are numerous questionable and probably landslide deposits throughout and surrounding the project area (Roberts, et al., 1998). According to records provided by the California Geological Survey, recent landslides have occurred

near the project area such as a slide over the roadway along Cloverdale Road near Butano State Park in 2023 and slides along Highway 236 and Lodge Road in eastern portions of Big Basin Redwoods State Park[10]

To minimize risk of landslide, the following SPRs are integrated into the project design: create a burn plan using California State Parks Prescribed Burn Plan template and minimize soil burn severity (SPR AQ-3), stabilize mechanically disturbed soils in treatment areas (SPR GEO-3), conduct pre rainy-season inspections and monitor immediately following the first large rainfall event (SPR GEO-4), minimize erosion through the limitation of heavy equipment use on steep slopes (SPR GEO-7), and evaluate slopes greater than 50% for unstable areas (SPR GEO-8).

The potential impacts associated with increased risk of landslides resulting from treatments are within the scope of the PEIR because treatment activities are consistent with those analyzed in the PEIR. Based on the implementation of the SPR AQ-3, SPR GEO-3, SPR GEO-4, SPR GEO-7, SPR GEO-8, and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact GEO-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in increased risk of landslide is essentially the same within and outside the treatable landscape; therefore, the potential impact to cause substantial increased risk of landslide is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

New Geology, Soils, Paleontology, and Mineral Resource Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.7.1 and 3.7.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Geology, Soils, Paleontology, and Mineral Resource Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No new impact related to geology, soils, paleontology, and mineral resources would occur that is not covered in the PEIR.

[10] https://www.conservation.ca.gov/cgs/landslides

4.7 Greenhouse Gas Emissions

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	AQ-3	GHG-2	PSU	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact GHG-1

Initial and maintenance treatments include mechanical, manual, targeted herbicide application, and prescribed burning treatments, which would generate greenhouse gas (GHG) emissions from the use of vehicles, equipment, power tools, and prescribed burning. Consistency of treatments under the CalVTP with applicable plans, policies, and regulations aimed at reducing GHG emissions was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.8.3, pages 10-11).

Material that results from treatment activities, such as being processed through chipping or air curtain burning and carbonization, may be hauled off site and donated to nearby willing recipients, such as privately owned farms, due to the lack of nearby biomass processing facilities. Biomass hauling is not expected to exceed a hauling distance of 15- miles from the project area.

This project is not a registered offset project under the Board's Assembly Bill 1504 Carbon Inventory Process, therefore, SPR GHG-1 does not apply. There are no other applicable SPRs; no SPRs are needed to maintain this impact at less than significant. This impact is within the scope of the PEIR because the proposed activities, associated equipment, duration of treatments, and generation of GHG emissions are consistent with those analyzed in the PEIR. Therefore, this impact will remain less than significant; this determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact GHG-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in conflicts with applicable plans, policies, and regulations aimed at reducing GHG emissions is essentially the same within and outside the treatable landscape; therefore, the potential impact to conflict with applicable plans, policies, and regulations aimed at reducing GHG emissions is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact GHG-2

Initial and maintenance treatments include mechanical, manual, targeted herbicide application, and prescribed burning treatments, which would generate greenhouse gas (GHG) emissions from the use of vehicles, equipment, power tools, and prescribed burning. Consistency of treatments under the CalVTP with applicable plans, policies, and regulations aimed at reducing GHG emissions was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.8.3, pages 11-17).

To minimize GHG emissions during treatments, SPR AQ-3, which requires the creation of a burn plan using California State Parks Prescribed Burn Plan template including documentation for methods that reduce GHG emissions during prescribed fire, is integrated into the project design. Additionally, Mitigation Measure GHG-2 will be implemented to reduce GHG emission associated with prescribed burning though the implementation of emission reduction techniques (i.e., conduct mosaic burning, leave large fuels unburned, reduce fuels prior to ignition, burn during higher fuel moisture levels, etc.). This project designed mechanical and manual treatments that overlap with prescribed burning treatments, which will create opportunities to employ GHG emission reduction techniques, such as by reducing the fuel accumulation prior to burning. Additionally, the proposed vegetation treatments are designed promote forest health and increase resilience to future wildfire through retaining healthy trees and vegetation, promoting the growth of larger trees and carbon storage potential, and reducing the continuity of horizontal and vertical fuels. It is likely that the GHG emissions released during treatments under the CalVTP would be less than wildfires and Section 3.16 of the PEIR discusses that there is a correlation between certain types of forest fuel treatments and reduced wildfire severity; the PEIR analysis indicates that wildfire is the primary source of GHG emissions and carbon loss (CalVTP Final PEIR Volume II Section 3.8.3, page 15).

This impact is within the scope of the PEIR because the proposed activities, associated equipment, duration of treatments, generation of GHG emissions, and intent of treatments to reduce future wildfire severity are consistent with those analyzed in the PEIR. Despite the reduction of GHG emissions through the implementation of SPR AQ-3 and Mitigation Measure GHG-2, uncertainties remain in estimating exact amounts of emissions and, therefore, this impact will remain potentially significant and unavoidable. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR (CalVTP Final PEIR Volume II Section 3.8.3, pages 11-17).

Addendum – Impact GHG-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments generate GHG emissions is essentially the same within and outside the treatable landscape; therefore, the potential impact related to the generation of GHG emissions is also considered potentially significant and unavoidable, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

New Impacts Related to GHG Emissions

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.8.1 and 3.8.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Impacts Related to GHG Emissions

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact ENG-1

Use of vehicles and mechanical equipment during initial and maintenance treatments will result in the consumption of energy through the use of fossil fuels. Fossil fuels may be used in crew vehicles, power tools, equipment, and other treatment materials that support treatment activities including manual, mechanical, targeted herbicide application, and prescribed burning. The use of fossil fuels for equipment and vehicles was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.9.3, pages 7-8).

The consumption of energy during implementation of the treatment project is within the scope of the PEIR because the treatment activities, as well as the associated equipment and duration of proposed work, are consistent with those analyzed in the PEIR. No SPRs or Mitigation Measures are applicable to this impact. Based on the consistency with the PEIR, the potential for this project to result in wasteful, inefficient, or unnecessary energy consumption will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

PSA Addendum – Impact ENG 1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in wasteful, inefficient, or unnecessary energy consumption is essentially the same within and outside the treatable landscape; therefore, the potential impact related to energy resources is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

New Energy Resource Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.9.1 and 3.9.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Energy Resource Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No new impact related to energy resources 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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 HYD-4	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 HAZ-9	NA	LTS	No	Yes
Impact HAZ-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites	PS	Impact HAZ-3, pp. 3.10-18 – 3.10-19	Yes	NA	HAZ-3	LTSM	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact HAZ-1

Initial and maintenance treatments will include manual, mechanical, and prescribed burning treatments, which will require the use of hazardous materials (i.e., fuels, oils, lubricants, fire accelerants, etc.). The potential for treatment activities to cause a significant health hazard from the use of hazardous materials during manual, mechanical, and prescribed burning treatment activities was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.10.3, pages 14-15). The use of herbicides is discussed under Impact HAZ-2.

To minimize the risk of causing significant health hazards from the use of hazardous materials, the following SPRs are integrated into the project design: maintain all equipment per manufacturer's specifications and in compliance with state and federal regulations, conduct daily inspections for leaks, and stabilize and fix leaking equipment promptly (SPR HAZ-1) and identify appropriate watercourse buffers to prevent hazardous materials from vehicles and equipment from entering watercourses (SPR HYD-4).

This impact is within the scope of the PEIR because the types of treatments and associated equipment and types of hazardous materials that will be used are consistent with those analyzed in the PEIR. Based on the implementation of the SPR HAZ-1, SPR HYD-4, and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact HAZ-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in health hazards from the use of hazardous materials is essentially the same within and outside the treatable landscape; therefore, the potential impact to cause significant health hazards from the use of hazardous materials is also considered less than significant, as described above.

In addition, State Parks proposed to revise SPR HAZ-1 and SPR HYD-4, both of which are applicable to this impact. Under revisions to SPR HAZ-1, any leaking equipment may be stabilized and fixed onsite. All other elements of SPR HAZ-1 will remain the same as presented in the PEIR. This revision is consistent with the purpose of SPR HAZ-1 and does not involve any changes to requirements regarding equipment maintenance that could affect significant health hazards caused by the use of hazardous materials. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of the manual, mechanical, targeted herbicide application, and prescribed pile burning treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation. For the reasons described, proposed revisions to SPR HAZ-1 and SPR HYD-4 will not result in a substantially more severe significant effect related to the use of hazardous materials than what was covered in the PEIR.

Therefore, the potential to result in significant health hazards from the use of hazardous material is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact HAZ-2

Initial and maintenance treatments will include targeted spot application of herbicides using ground-based methods, such as a backpack sprayer. No aerial spraying of herbicides will occur. The potential for treatment activities to cause a significant health hazard from the use of herbicides was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.10.3, pages 16-18).

The application methods and types of herbicides that may be used under this PSA/Addendum are consistent with those analyzed in the PEIR. Herbicides will be applied by licensed applicators in compliance with all laws, regulations, and herbicide label instructions, consistent with herbicide use described in the PEIR.

To minimize the risk of causing significant health hazards from the use of herbicide, the following SPRs are integrated into the project design: a Spill Prevention and Response Plan will be prepared prior to any herbicide treatment activities (SPR HAZ-5), compliance to herbicide application regulations including permitting and licensing through the respective county Agricultural Commissioner's office prior to herbicide application (SPR HAZ-6), triple rinse herbicide containers and dispose of rinsed materials at an approved site (SPR HAZ-7), minimize herbicide drift into public areas through application parameters such as limitations for nozzle pressure and nozzle distance from vegetation (SPR HAZ-8), and notification of herbicide within 500 feet of public areas including posting signs on either side of herbicide treatment areas (SPR HAZ-9).

This impact is within the scope of the PEIR because the application methods and types of herbicides that will be used are consistent with those analyzed in the PEIR. Based on the implementation of the SPR HAZ-5, SPR HAZ 6, SPR HAZ-7, SPR HAZ-8, SPR HAZ-9, and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact HAZ-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in health hazards from the use of herbicides is essentially the same within and outside the treatable landscape; therefore, the potential to result in significant health hazards from the use of herbicides is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact HAZ-3

Initial and maintenance treatments proposed under this project include mechanical and prescribed burning treatment activities, which have the potential to disturb soils and expose workers, the public, or the environment to hazardous material if a contaminated site is present within the project area. The potential for the treatment activities to disturb or encounter contaminated sites that could expose workers, the public, or the environment to hazardous materials was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.10.3, pages 19-20).

To minimize the risk of exposure of significant hazardous from the disturbance of known hazardous material sites, a database search for hazardous material sites utilizing the Department of Toxic Substances Control (DTSC) Cortese List per Mitigation Measure HAZ-3 was completed. The database search resulted in no known hazardous material sites within the project area. However, the search did identify two sites approximately 2 miles west of the project area, and a third site 2 miles southeast of the project area; these sites are identified as state response and military evaluation clean-up sites (Attachment F). One of the sites west of the project area has land use restrictions, whereas the other two sites have no further action status. Given the distance between the project area boundary and the nearest known hazardous sites, the proposed project will not have impacts on these sites.

No SPRs are applicable to this impact. Based on the consistency with the PEIR and following the application of Mitigation Measure HAZ-3, the potential for this project to result in exposure to significant hazards from the disturbance of known hazardous material sites is reduced to be less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact HAZ-3

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in exposure to significant hazards from the disturbance of hazardous material sites is essentially the same within and outside the treatable landscape; therefore, the potential to result in exposure to significant hazards from the disturbance of hazardous material sites is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

New Hazardous Materials, Public Health and Safety Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.10.1 and 3.10.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Hazardous Materials, Public Health and Safety Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No new impact related to hazardous materials, public health, or 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	Yes	AQ-3 BIO-4 GEO-4 HYD-1 HYD-4	NA	LTS	No	Yes
Impact HYD-2: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Manual or Mechanical Treatment Activities	LTS	Impact HYD-2, pp. 3.11-27 – 3.11-29	Yes	BIO-1 GEO-1 GEO-2 GEO-3 GEO-4 GEO-5 GEO-7 GEO-8 HAZ-1 HAZ-5 HYD-1 HYD-4 HYD-5	NA	LTS	No	Yes
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	None	NA	No Impact	No	Yes
Impact HYD-4: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Ground Application of Herbicides	LTS	Impact HYD-4, pp. 3.11-30 – 3.11-31	Yes	BIO-4 HAZ-5 HAZ-7 HYD-1 HYD-5	NA	LTS	No	Yes

Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	GEO-4 GEO-5 HYD-1 HYD-4 HYD-6	NA	LTS	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

The project area predominantly consists of the Waddell Creek, Green Oaks Creek, Cascade Creek, and Gazos Creek Cal Water 2.2 Planning Watersheds, with minor overlap with the East Waddell Creek and Boulder Creek watersheds. Additionally, the project area contains a myriad of hydrologic features, predominately consisting of Class I, Class II, and Class III watercourses, as defined by the Forest Practice Rules, 14 CCR Chapter 4, 916.5. Waddell Creek is a Class I watercourse that flows approximately 11 miles from the heart of the Santa Cruz Mountains, through the project area in Big Basin Redwoods State Park, and drains into the Pacific Ocean at Waddell State Beach. Multiple Class I watercourses flow through the project area via AñoNuevo State Park, such as Gazos Creek, Whitehouse Creek, and Old Woman's Creek. All of these watercourses are connected to various Class II and Class III watercourses that span the topographic depressions throughout the project area.

Several impacts below evaluate compliance with water quality standards or waste discharge requirements, which pertains to the implementation of SPR HYD-1 to require compliance with these regulations. All CalVTP projects are automatically enrolled in the State Water Resources Control Board's Vegetation Treatment General Order; through the implementation of all applicable SPRs and Mitigation Measures, this project is in compliance with the General Order.

Impact HYD-1

Initial and maintenance treatments include prescribed burning treatments (i.e., prescribed broadcast burning and prescribed pile burning). The potential for prescribed burning activities to cause runoff and violate water quality regulations or degrade water quality was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.11.3, pages 25-27).

The project area is comprised of various watercourses, including Class I, Class II, and Class III systems. Appropriate WLPZ buffers will be established to identify locations where burn piles, ignitions, and use of

accelerants may not occur during prescribed fire treatments, per SPR HYD-4. During prescribed broadcast burning, fire may not always be limited to the boundaries of WLPZs or Class III watercourses that are hydrologically connected to aquatic habitat during high flow; however, as analyzed in the PEIR, prescribed fire treatments are designed to avoid detrimental effects or conditions that would result from intensive wildfires due to being conducted under specific environmental conditions that are less conducive to extreme fire behavior.

To minimize the risk of water quality impacts resulting from prescribed burning treatments, the following SPRs are integrated into the project design: create a burn plan using California State Parks Prescribed Burn Plan template (SPR AQ-3), design treatments to avoid loss of riparian habitat function and prevent vegetation removal that could reduce stream shading (SPR BIO-4), conduct pre rainy-season inspections and monitor immediately following the first large rainfall event (SPR GEO-4), minimize burn pile size (SPR GEO-6), comply with water quality regulations and waste discharge requirements (WDR) (SPR HYD-1), and identify and protect WLPZs with appropriate buffers where ignitions and use of accelerant will not occur (SPR HYD-4).

This impact is within the scope of the PEIR because the use of lower-intensity prescribed burns and associated impacts to water quality are consistent with those analyzed in the PEIR. Based on the implementation of the SPR AQ-3, SPR BIO-4, SPR GEO-4, SPR GEO-6, SPR HYD-1, SPR HYD-4, and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact HYD-1

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the potential for impacts to water quality resulting from prescribed burning treatments is essentially the same within and outside the treatable landscape.

In addition, as described under Section 1.2.3, “Proposed Project Revisions,” State Parks proposes to revise SPR HYD-4, which applies to this impact. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of manual, mechanical, prescribed pile burning, and targeted herbicide treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation. For the reasons described, proposed revisions to SPR HYD-4 would not result in a substantially more severe significant effect related to water quality impacts resulting from prescribed burning than what was covered in the PEIR.

Therefore, the potential impact to water quality resulting from prescribed burning is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact HYD-2

Initial and maintenance treatments will include the use of manual and mechanical treatments, which have the potential to result in ground disturbance and subsequent erosion and runoff. The potential for mechanical and manual treatments to violate water quality control regulations or degraded water quality was evaluated in the PEIR (CalVTP Final PEIR Volume II Section 3.11.3, pages 27-29).

The project area is comprised of various watercourses, including Class I, Class II, and Class III systems. Although most mechanical and manual treatment areas are designed to avoid streams and watercourses, appropriate WLPZs will be established around any watercourses that are within 300 feet of the manual, mechanical, targeted herbicide application, and prescribed pile burning treatment areas, per SPR HYD-4 and the proposed revision addressed in the addendum to this impact below.

To minimize the risk of water quality impacts resulting from manual and mechanical treatments, the following SPRs are integrated into the project design: review data and conduct reconnaissance surveys to identify potential sensitive biological resources (SPR BIO-1), suspend mechanical operations during heavy precipitation (SPR GEO-1), limit high ground pressure vehicles (SPR GEO-2), stabilize mechanically disturbed soils in treatment areas (SPR GEO-3), conduct pre rainy-season inspections and monitor immediately following the first large rainfall event (SPR GEO-4), drain storm water via water breaks (SPR GEO-5), minimize erosion through the limitation of heavy equipment use on steep slopes (SPR GEO-7), evaluate slopes greater than 50% for unstable areas (SPR GEO-8), maintain all equipment per manufacturer's specifications and in compliance with state and federal regulations, conduct daily inspections for leaks, and stabilize and fix leaking equipment promptly (SPR HAZ-1), a Spill Prevention and Response Plan will be prepared prior to any herbicide treatment activities (SPR HAZ-5), comply with water quality regulations and waste discharge requirements (WDR) (SPR HYD-1), identify and protect WLPZs with appropriate buffers (SPR HYD-4), and service and refuel equipment outside of WLPZs and wet areas (SPR HYD-5).

This impact is within the scope of the PEIR because the mechanical and manual treatments and associated impacts to water quality are consistent with those analyzed in the PEIR. Based on the implementation of SPR BIO-1, SPR GEO-1 through SPR GEO-5, SPR GEO-7, SPR GEO-8, SPR HAZ-1, SPR HAZ-5, SPR HYD-1, SPR HYD-4, SPR HYD-5, and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR

Addendum – Impact HYD-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in water quality impacts from manual and mechanical treatments is essentially the same within and outside the treatable landscape; therefore, the potential impact to cause significant health hazards from the use of hazardous materials is also considered less than significant, as described above.

In addition, State Parks proposed to revise SPR HAZ-1 and SPR HYD-4, both of which are applicable to this impact. Under revisions to SPR HAZ-1, any leaking equipment may be stabilized and fixed onsite. All other elements of SPR HAZ-1 will remain the same as presented in the PEIR. This revision is consistent with the purpose of SPR HAZ-1 and does not involve any changes to requirements regarding equipment maintenance that could result in water quality impacts from manual and mechanical treatments. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of the manual, mechanical, targeted herbicide application, and prescribed pile burning treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation. For the reasons described, proposed revisions to SPR HAZ-1 and SPR HYD-4 will not result in a substantially more severe significant effect related to result in water quality impacts from manual and mechanical treatments than what was covered in the PEIR.

Therefore, the potential to result in water quality impacts from manual and mechanical treatments is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact HYD-3

This project does not include prescribed herbivory, therefore, this impact does not apply; there will be no impact to water quality through the implementation of prescribed herbivory as a result of this project.

Addendum – Impact HYD-3

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent present in the PEIR. However, within the boundary of the project area; prescribed herbivory is not included. Therefore, this impact does not apply; there will be no impact on water quality as a result of prescribed herbivory during this project.

Impact HYD-4

Initial and maintenance treatments may include the use of targeted herbicide application to manage non-native and invasive species, which can affect water quality through runoff, leaching, drift, and misapplication or spills. The potential for targeted herbicide application activities to violate water quality control 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 applications of herbicides was evaluated in the PEIR (CalVTP Final PEIR Volume II Section 3.11.3, pages 29- 31).

The project area is comprised of a system of Class I, Class II, and Class III watercourses that have hydrologic connectivity to various forms of aquatic habitat during high flow events. To minimize the risk of water quality impacts resulting from targeted herbicide treatments, the following SPRs are integrated into the project design: design treatments to avoid loss of riparian habitat function and prevent vegetation removal that could reduce stream shading (SPR BIO-4), a Spill Prevention and Response Plan will be prepared prior to any herbicide treatment activities (SPR HAZ-5), triple rinse herbicide containers and dispose of rinsed materials at an approved site (SPR HAZ-7), comply with water quality regulations and waste discharge requirements (WDR) (SPR HYD-1), and service and refuel equipment outside of WLPZs and wet areas (SPR HYD-5).

Potential impacts are within the scope of the activities and impacts addressed in the PEIR because the methods of herbicide application, transportation, storage, and disposal are consistent with those analyzed in the PEIR. Based upon compliance with Environmental Protection Agency (EPA) labels and the implementation of SPR BIO-4, SPR HAZ-5, SPR HAZ7, SPR HYD-1, and SPR HYD-5, the potential for this project to result in a violation of 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 is less than significant. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Addendum – Impact HYD-4

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in water quality impacts through the use of targeted ground-application herbicides is essentially the same within and outside the treatable landscape; therefore, the potential to result in water quality impacts from targeted ground-application herbicides is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact HYD-5

Initial and maintenance treatments could result in ground disturbance, which could directly or indirectly alter existing drainage patterns. The potential for treatment activities to substantially alter existing

drainage patterns of the project site was evaluated in the PEIR (CalVTP Final PEIR Volume II Section 3.11.3, page 31).

To minimize substantial alterations to existing drainage patterns, the following SPRs are integrated into the project design: conduct pre rainy-season inspections and monitor immediately following the first large rainfall event (SPR GEO-4), drain storm water via water breaks (SPR GEO-5), comply with water quality regulations and waste discharge requirements (WDR) (SPR HYD-1), and identify and protect WLPZs with appropriate buffers (SPR HYD-4), and mark stormwater drainage infrastructure adjacent to treatment areas prior to ground-disturbing activities (SPR HYD-6).

This impact is within the scope of the PEIR because the treatment activities and associated impacts to existing drainage patterns are consistent with those analyzed in the PEIR. Based on the implementation of SPR GEO-4, SPR GEO-5, SPR HYD-1, SPR HYD-4, SPR HYD-6, and consistency with the scope of the PEIR, this impact remains less than significant. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Addendum – Impact HYD-5

The inclusion of land in the proposed project treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent analyzed in the PEIR. However, within the boundary of the project area, the potential to cause substantial alterations to existing drainage patterns is essentially the same within and outside the treatable landscape.

In addition, as described under Section 1.2.3 Proposed Project Revisions, State Parks proposes to revise SPR HYD-4, which applies to this impact. SPR HYD-4 is revised to establish WLPZs only for watercourses within 300 feet of manual, mechanical, prescribed pile burning, and targeted herbicide treatments. This revision is consistent with the original intent of SPR HYD-4 to prevent degradation of watercourses during implementation. For the reasons described, proposed revisions to SPR HYD-4 would not result in a substantially more severe significant effect related to causing substantial alterations to existing drainage patterns than what was covered in the PEIR.

Therefore, the potential impact to existing drainage patterns is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

New Hydrology and Water Quality Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.11.1 and 3.11.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Hydrology and Water Quality Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	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]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact LU-1

Initial and maintenance treatments would occur on California State Park land located in Santa Cruz and San Mateo counties. The potential for vegetation treatments to cause a significant environmental impact due to a conflict with a land use plan, policy or regulation was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.12.3, pages 13-14).

To minimize the risk of conflicting with a land use plan, policy, or regulation, SPR AD-3 has been integrated into the project design. This project is designed to align with the 2013 Big Basin State Park General Plan and 2024 Forest Management Strategy, the 2008 Butano State Park General Plan, and the 2008 Año Nuevo State Park General Plan, and is consistent with local policies and regulations. For instance, as noted in Section 4.12 Noise, below, treatment activities will occur during daytime hours consistent with the Santa Cruz County Code, Section 8.30.010 and/or San Mateo County Noise Ordinance PRC Section 4.88.360(e). While there is the potential for prescribed burning to occur during nighttime and weekend hours, treatment activities using heavy machinery and noise-generating equipment (e.g., chainsaws and helicopters) will be limited to daytime hours which will avoid the potential to cause sleep disturbance to residents during the more noise-sensitive evening and nighttime hours and conflict with the county codes.

The treatment types and activities are within the scope of those evaluated in the PEIR. No conflict will occur because the project proponent will adhere to local ordinances or any other land use plan, policy, or regulation, as required by SPR AD-3. Additionally, land use will remain unchanged as a result of this

project. Therefore, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact LU-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in conflicts with a land use plan, policy, or regulation is essentially the same within and outside the treatable landscape; therefore, the potential to result in conflicts with a land use plan, policy, or regulation is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact LU-2

Initial and maintenance treatments may involve hiring vegetation treatment workers that do not reside locally. The potential for initial and maintenance treatments to result in substantial population growth as a result of increases in demand for employees was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.12.3, pages 14-15).

Impacts associated with short-term increases in the demand for workers during implementation of the treatments are consistent with (less than) the crew size analyzed in the PEIR for the types of treatments proposed. Prescribed burning treatment activities will require between approximately 10 and 50 crew members, depending on the size of the burn unit. Prescribed burn crews will predominantly consist of local State Park employees and staff, unless additional resources are requested for support. Mechanical treatments will typically be completed by crews of approximately five to 20 staff. Targeted herbicide treatments typically will occur with crews of approximately two to four people, and manual treatments will be implemented by crews of approximately three to 20 crew members. Employing local contractors will be encouraged where feasible to minimize the risk of impacting population and housing resources.

No SPRs are applicable to this impact. Based on the consistency with the PEIR, the potential for this project to result in substantial population growth as a result of increases in demand for employees is less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact LU-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in substantial population growth as a result of increases in demand for employees is essentially the same within and outside the treatable landscape; therefore, the potential to result in substantial population growth as a result of increases in demand for employees is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

New Land Use and Planning, Population and Housing Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.12.1 and 3.12.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Land Use and Planning, Population and Housing Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No new impact related to land use and planning, 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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 During Treatment Activities	LTS	Impact NOI-2, p. 3.13-12	Yes	NOI-1	NA	LTS	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact NOI-1

Initial and maintenance treatments proposed for this project will require the use of noise generating equipment during treatment activities and biomass processing. The potential for substantial short-term increase in ambient noise levels was analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.13.3, pages 9-12).

Potential noise receptors located in close proximity to the project area primarily near the southeastern and northwestern portions of the project area, where there are scattered rural homes and landowners. Temporary noise receptors include park visitors that use the park for recreation during daylight hours, which may overlap with operational hours. All treatment activities using noise-generating equipment (i.e., heavy mechanized equipment, chainsaws and other hand-held power tools, chippers, helicopters, etc.) will be limited to daytime hours.

To minimize the potential to result in substantial short-term increase in exterior ambient noise levels, the following SPRs are integrated into the project design: comply with all applicable with land use plans, policies, or regulations (SPR AD-3), restrict vegetation treatments to daytime hours (SPR NOI-1), properly maintain all equipment and equip with proper intake and exhaust shrouds (SPR NOI-2), close all equipment engine shrouds during operations (SPR NOI-3), vegetation treatment activities and staging

areas will be located away from sensitive receptors as feasible (SPR NOI-4), restrict equipment idling time (SPR NOI-5), and provide notification to nearby sensitive receptors when heavy equipment will be used for treatments (SPR NOI-6).

The Santa Cruz County Code Section 8.30.010 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., 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 Section 8.30.010 are more stringent during the nighttime and early morning hours, between the hours of 10:00 p.m. and 8:00 a.m. (Santa Cruz County Code Section 8.30.010).

Additionally, under San Mateo County Noise Ordinance PRC Section 4.88.360(e), daytime hours are defined as 7:00 a.m. to 6:00 p.m. Monday through Friday, or 9:00 a.m. to 5:00 p.m. on Saturdays.

Short term increases in noise from the use of heavy equipment is within the scope of the activities and impacts addressed in the PEIR because the types and number of equipment proposed, as well as the duration of use, are consistent with those analyzed in the PEIR. Based on the implementation of SPR AD-3, SPR NOI-1 through SPR NOI-6, and consistency with the PEIR, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact NOI-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in substantial short-term increase in exterior ambient noise levels is essentially the same within and outside the treatable landscape; therefore, the potential to result in substantial short-term increase in exterior ambient noise levels is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

Impact NOI-2

Initial and maintenance treatments will involve large trucks hauling heavy equipment and worker trucks driving into the project area. The potential for a substantial short-term increase in Single Event Noise Levels (SENL) was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.13.3, page 12).

Haul routes used to mobilize equipment and crews into the project area include access via Highway 236, Highway 1, Chalks Fire Road, China Grade Road, or Cloverdale Road; these routes can be accessed by Highway 9 and Highway 35, which connect with a myriad of roads and highways within Santa Cruz and San Mateo counties. Hauling heavy equipment can be expected during mobilization at the start of treatments and during de-mobilization at the end of treatments; haul routes may vary based on equipment accessibility within the project area. Haul truck trips on the local roadways will pass by residential receptors and the event of each truck passing by could slightly increase SENLs. Vehicle traffic on area highways will not generate a noticeable increase in traffic-related noise. Potential noise receptors located in close proximity to the project are primarily in the southeastern portion of the park's boundaries, where there are several rural homes and landowners. Also, there are scattered landowners that occur on the northern and eastern boundaries that are also considered noise receptors. Temporary noise receptors

include park visitors that use the park for recreation during daylight hours, which may overlap with operational hours.

To minimize the potential to result in substantial short-term increase in truck-generated SENLs, SPR NOI-1 has been integrated into the project design. As described in Impact NOI-1 above, SPR NOI-1 restricts operations to daytime hours, which are defined as 8:00 a.m. to 10:00 p.m. in Santa Cruz County and as 7:00 a.m. to 6:00 p.m. Monday through Friday, or 9:00 a.m. to 5:00 p.m. on Saturdays in San Mateo County. The haul trips associated with the treatment will occur during daytime hours, which will avoid the potential to cause sleep disturbance to residents during the more noise-sensitive evening and nighttime hours.

This impact is within the scope of the PEIR because the number and types of equipment and haul trips proposed are consistent with those analyzed in the PEIR. Based on the implementation of SPR NOI-1 and consistency with the PEIR, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact NOI-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in substantial short-term increase in truck-generated SENLs is essentially the same within and outside the treatable landscape; therefore, the potential to result in substantial short-term increase in truck-generated SENLs is also less than significant, as described above. This determination is consistent with the PEIR and would not constitute a substantially more significant impact than what was covered in the PEIR.

New Noise Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.13.1 and 3.13.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Noise Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	AD-3 REC-1	NA	LTS	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

As described in Section 1.5, the project area spans multiple properties, including Big Basin Redwoods State Park, Butano State Park, Año Nuevo State Park, Sempervirens Fund properties, and a Save the Redwoods League property. Being public recreational properties, Big Basin Redwoods State Park and Butano State Park contain a myriad of recreational opportunities, such as hiking, biking, camping, day-use facilities, and equestrian trails. While Año Nuevo State Park also contains many recreational opportunities, there are few opportunities within the portion of the park included in the project area. Following the 2020 CZU Fire that burned through the majority of the park footprint, State Parks are actively re-opening or re-constructing trails and facilities for public use alongside the development of the Facilities Management Plan. The properties owned by the Sempervirens Fund are not open to the public for recreational activities. One of the management objectives for the Cascade Creek property owned by Save the Redwoods League is to further future public recreational opportunities.

Impact REC-1

The initial and maintenance treatments proposed for this project may directly or indirectly disrupt recreational activities within designated recreational areas, potentially resulting in conflicts with recreationists due to restrictions or limited park access, degradation of views, decreased air quality, and/or traffic during implementation. The potential for treatment activities to disrupt recreational activities was analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.14.3, pages 6-7).

To reduce the risk of disrupting recreational activities within or in proximity to treatment areas, the following SPRs are integrated into the project design: maintain consistency with local plans, policies, and ordinances, including the Big Basin Redwoods State Park General Plan published in 2013, Butano State

Park General Plan published in 2008, and Año Nuevo State Park General Plan published in 2008 (SPR AD-3) and, where feasible, provide notifications of recreational area closures two weeks prior to commencement of treatment activities (SPR REC-1). During prescribed broadcast burning operations, environmental prescriptions for operations may not allow a two-week notice of trail closure, however, the project proponent will provide as much advanced notice as feasible.

The temporary disruption of recreational activities during implementation is within the scope of activities and impacts addressed in the PEIR because the treatments and associated equipment and duration of use is consistent with those analyzed in the PEIR. Based on the implementation of the SPR AD-3, SPR REC-1, and consistency with the scope of PEIR, the potential for this project to result in direct or indirect disruption of recreational activities within designated recreational areas remains less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact REC-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in direct or indirect disruption of recreational activities within designated recreational areas is essentially the same within and outside the treatable landscape; therefore, the potential impact related to recreational resources is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

New Recreation Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.14.1 and 3.14.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

Addendum – New Recreation Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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 TRAN-1	NA	LTS	No	Yes
Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses	LTS	Impact TRAN-2 pp. 3.15-10 – 3.15-11	Yes	AD-3 HYD-2 TRAN-1	NA	LTS	No	Yes
Impact TRAN-3: Result in a Net Increase in VMT for the Proposed CalVTP	PSU	Impact TRAN-3 pp. 3.15-11 – 3.15-13	Yes	NA	AQ-1	PSU	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact TRAN-1

Initial and maintenance treatments have the potential to increase vehicular traffic due to mobilizing equipment, worker transportation, and conducting vegetation treatments in proximity to roadways. The potential for a temporary increase in traffic to conflict with a program, plan, or policy addressing roadways facilities or prolonged road closures was evaluated in the PEIR (CalVTP Final PEIR Volume II Section 3.15.3, pages 9-10).

No road closures will be necessary for the implementation of this project; however, Highway 236, Highway 1, Chalks Fire Road, China Grade, and Cloverdale Road may be utilized by equipment and crew vehicles during operations, which may require traffic control to reduce traffic impacts to State Parks visitors and residents. Additional Park roads that are inaccessible to the public will be used during mobilization and operations, which will not affect traffic. As described in Impact LU-2, the number of workers needed to implement the proposed treatment activities is consistent with (less than) the crew sizes analyzed in the PEIR. Coordination for necessary traffic control will occur prior and during vegetation treatments as needed.

To minimize temporary traffic impacts due to conflicting with a program, plan, ordinance, or policy, the following SPRs are integrated into the project design: comply with all applicable with land use plans, policies, or regulations (SPR AD-3) and implement traffic control during treatments including the development of a Traffic Management Plan as needed (SPR TRAN-1).

The proposed treatment project will be short-term and any temporary increases in traffic related to treatments are within the scope of the activities and impacts addressed in the PEIR because the treatment duration and number of vehicles is consistent with those analyzed in the PEIR. Based on the implementation of SPR AD-3, SPR TRAN-1, and consistency with the PEIR, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact TRAN-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in temporary traffic impacts due to conflicting with a program, plan, ordinance, or policy is essentially the same within and outside the treatable landscape; therefore, the potential impact related to temporary traffic impacts is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact TRAN-2

Initial and maintenance treatments include prescribed burning treatment activities that have the potential to increase transportation hazards due to smoke that can affect visibility along roadways. This project will not require the construction or alteration of any roadways. The potential for smoke to affect visibility along roadways during implementation of treatment activities and result in a substantial hazard was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.15.3, pages 10-11).

To minimize a substantial increase in hazards due to a design feature or incompatible uses, the following SPRs are integrated into the project design: comply with all applicable with land use plans, policies, or regulations (SPR AD-3), new roads will not be constructed and existing roads will not be reconstructed, including temporary roads (SPR HYD-2), and implement traffic control during treatments, including the development of a Traffic Management Plan as needed and monitoring smoke dispersion (SPR TRAN-1).

This impact is within the scope of the PEIR because the equipment and methods used for prescribed burning are consistent with those analyzed in the PEIR. Based on the implementation of SPR AD-3, SPR HYD-2, SPR TRAN-1, and consistency with the PEIR, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact TRAN-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in substantial increase in hazards due to design feature or incompatible uses is essentially the same within and outside the treatable landscape; therefore, the potential impact related to substantial increase in hazards is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact TRAN-3

Initial and maintenance treatments have the potential to increase vehicle miles traveled (VMT) above baseline conditions because the project area is in a remote location and will require vehicle trips to access treatment areas. The potential for net increase in VMT to occur was analyzed in the PEIR and was identified as potentially significant and unavoidable (CalVTP Final PEIR Volume II Section 3.15.3, pages 11-13).

This project is expected to remain below the threshold of 110 trips per day, which is generally assumed to cause less-than-significant transportation impacts, as discussed in the PEIR and the Technical Advisory on Evaluation Transportation Impacts (OPR, 2018). The highest VMT will occur at the beginning and end of project activities and will likely occur on days where broadcast burning is likely to occur. Maximum daily VMT will consist of transportation of fire suppression equipment, hand crews, and heavy machinery to and from the project site, however, number of trips will remain below 110. Furthermore, hiring local contractors will be encouraged where feasible to reduce the amount of VMT.

To minimize VMT, contractors will be encouraged to carpool or use public transportation when feasible, per Mitigation Measure AQ-1.

Temporary increases in VMT are within the scope of the activities and impacts addressed in the PEIR because the number and duration of increased vehicle trips is consistent with those analyzed in the PEIR. No SPRs are applicable to this impact. Despite the reduction of VMT resulting from Measure AQ-1, uncertainties remain in quantifying the expected decrease in VMT during CalVTP treatments and future wildfire occurrences, therefore, this impact will remain potentially significant and unavoidable. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR (CalVTP Final PEIR Volume II Section 3.15.3, pages 12-13).

Addendum – Impact TRAN-3

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in a net increase of VMT is essentially the same within and outside the treatable landscape; therefore, the potential impact related to VMT is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

New Transportation Impacts

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.15.1 and 3.15.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Transportation Impacts

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	Yes	UTIL-1	NA (No feasible mitigation available)	PSU	No	Yes
Impact UTIL-3: Comply with Federal, State, and Local Management and Reduction Goals, Statutes, and Regulations Related to Solid Waste	LTS	Section 3.16.2 pp. 3.16-6 – 3.16-7; Impact UTIL-2 p. 3.16-12	Yes	AD-3 UTIL-1	NA	LTS	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact UTIL-1

Initial and maintenance treatments for this project will include manual, mechanical, prescribed burning, and targeted herbicide application treatments, which may require onsite water supply for fire suppression during prescribed burn activities as well as dust control during vehicular travel on unpaved surfaces and mechanical vegetation removal. If needed, water will be supplied from water trucks, water trailers, onsite water tanks and hydrants, or fire engines. The potential to result in physical impacts associated with provision of sufficient water supplies and the potential increased demand for water supplies was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.16.3, page 9). Water sources will be identified for the contractor and coordination with State Parks staff will occur as necessary.

This impact is within the scope of the activities and impacts addressed in the PEIR because the size and scope of treatments are consistent with those analyzed in the PEIR. No SPRs are applicable to this impact. Based on the consistency with the PEIR, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact UTIL-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in physical impacts associated with provision of sufficient water supplies is essentially the same within and outside the treatable landscape; therefore, the potential impact related to sufficient water supply is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact UTIL-2

Initial and maintenance treatments will generate biomass within the project area. Biomass generated by treatments will be disposed of with pile burning, broadcast burning, broadcast burning, masticating (mulching), chipping, lop and scattering, or air curtain burning or carbonization. The potential to generate solid waste in excess of state standards or exceed local infrastructure capacity was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.16.3, page 10-12).

As part of the generation of biomass through the methods described above, the hauling, skidding, and decking of biomass to be processed is considered in this PSA. The project proponent may store whole logs on site for later disposal. Additionally, material that is processed through chipping or air curtain burning and carbonization may be hauled off site and donated to nearby willing recipients, such as privately owned farms, due to the lack of nearby biomass processing facilities. This project may haul up to approximately 2.5 percent of the generated biomass off-site for disposal. Invasive plant and noxious weed biomass will be treated on-site (e.g., prescribed burning), when possible, to eliminate seed and propagules. If invasive plant biomass cannot be treated on-site, there will be the potential for some to be removed and will be disposed of off-site at an appropriate waste collection facility.

To minimize the generation of solid biomass in excess of state standards or local infrastructure capacity, SPR UTIL-1 is integrated into the project design and requires that a solid organic waste disposition plan be developed for any biomass material that is disposed of outside of the project area.

This impact is within the scope of the activities and impacts addressed in the PEIR because the types and amount of biomass that may need to be hauled off-site are consistent with those analyzed in the PEIR. This impact was identified as potentially significant and unavoidable in the PEIR because biomass hauled off-site could exceed the capacity of existing infrastructure for handling biomass and it was determined that there are no feasible mitigation measures to adequately reduce the volume of biomass generated from CalVTP treatment activities (CalVTP Final PEIR Volume II Section 3.16.1, page 12). For the proposed treatment project, biomass may be removed and hauled to an off-site facility if other disposal options do not meet treatment goals. While the amount of biomass generated is not expected to exceed the capacity of existing local infrastructure in Santa Cruz or San Mateo counties because only a small amount of biomass (up to approximately 2.5 percent) will be hauled off-site, it will contribute to the environmental significance conclusion in the PEIR; therefore, for purposes of CEQA compliance, this will remain potentially significant and unavoidable. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact UTIL-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in solid waste in excess of state standards or local infrastructure capacity is essentially the same within and outside the treatable landscape; therefore, the potential impact related to the generation of solid waste biomass is also considered potentially significant and unavoidable, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact UTIL-3

As discussed above in Impact UTIL-2, initial and maintenance treatments will generate biomass within the project area. Biomass generated by treatments will be disposed of with pile burning, broadcast burning, broadcast burning, masticating (mulching), chipping, lop and scattering, or air curtain burning or carbonization. The potential to conflict with federal, state, and local management and reduction goals, statutes, and regulations related to solid waste was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.16.3, page 12).

As part of the generation of biomass through the methods described above, the hauling, skidding, and decking of biomass to be processed is considered in this PSA. The project proponent may store whole logs on site for later disposal. Additionally, material that is processed through chipping or air curtain burning and carbonization may be hauled off site and donated to nearby willing recipients, such as privately owned farms, due to the lack of nearby biomass processing facilities. This project may haul up to approximately 2.5 percent of the generated biomass off-site for disposal. Invasive plant and noxious weed biomass will be treated on-site (e.g., prescribed burning), when possible, to eliminate seed and propagules. If invasive plant biomass cannot be treated on-site, there will be the potential for some to be removed and will be disposed of off-site at an appropriate waste collection facility.

To minimize the generation of solid biomass in excess of state standards or local infrastructure capacity, the following SPRs are integrated into the project design: comply with all applicable with land use plans, policies, or regulations (SPR AD-3) and develop a solid organic waste disposition plan for any biomass material that is disposed of outside of the project area (SPR UTIL-1).

This impact is within the scope of the activities and impacts addressed in the PEIR because the type and amount of biomass (up to approximately 2.5 percent) that may need to be hauled off-site are consistent with those analyzed in the PEIR. Based on the application of SPR AD-3, SPR UTIL-1, and consistency with the PEIR, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact UTIL-3

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in conflict with federal, state, and local management and reduction goals, statutes, and regulations related to solid waste is essentially the same within and outside the treatable landscape; therefore, the potential impact related to solid waste is also considered less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

New Impacts to Public Services, Utilities and Service Systems

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.16.1 and 3.16.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Impacts to Public Services, Utilities and Service

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No new impact related to public services, utilities, and service 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	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	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	AD-3 HAZ-2 HAZ-3 HAZ-4	NA	LTS	No	Yes
Impact WIL-2: Expose People or Structures to Substantial Risks Related to Post-Fire Flooding or Landslides	LTS	Section 3.17.1; Impact WIL-2 pp. 3.17-15 – 3.17-16	Yes	GEO-3 GEO-4 GEO-5 GEO-8 AQ-3	NA	LTS	No	Yes

[1]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**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Impact WIL-1

Initial and maintenance treatments for this project include prescribed broadcast burning, prescribed pile burning, manual, mechanical, and targeted herbicide application treatments. These treatment activities have potential to pose a risk of accidental wildfire ignition from the use of vehicles, heavy machinery, or power tools or risk of a prescribed fire escaping its control lines. The potential to exacerbate fire risk and expose people to uncontrolled spread of wildfire was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.17.3, page 13-14).

Implementing a prescribed burn treatment requires extensive planning, including the preparation of prescription burn plans, smoke management plans, site-specific weather forecasting, public notifications, safety considerations, and ultimately favorable weather conditions so a burn can occur on a given day, as described in the PEIR (CalVTP Final PEIR Volume II Section 3.17.1, pages 6-8). In addition, prior to implementing a prescribed burn, fire containment lines will be established by clearing vegetation surrounding the designated burn area to help prevent the accidental escape of fire. Furthermore, water containers and safety equipment will be staged on-site to address the rare case of an accidental fire escape.

To minimize exacerbating fire risk and exposing people to uncontrolled spread of wildfire, the following SPRs are integrated into the project design: comply with all applicable with land use plans, policies, or regulations (SPR AD-3), equip all machine-powered hand tools with federal or state-approved spark

arrestors (SPR HAZ-2), workers will carry one fire extinguisher per chainsaw and one long-handle shovel and one axe or Pulaski (SPR HAZ-3), and permit smoking only in designated smoking areas with barren or cleared mineral soil (SPR HAZ-4). In addition, during the development of contract specifications, the project proponent may outline additional fire suppression equipment and tools that meet or exceed the standards set forth by the SPRs above. Increased wildfire risk associated with prescribed burning and the use of heavy equipment for vegetation management is within the scope of the PEIR because the types of equipment and treatment duration of the proposed project are consistent with those analyzed in the PEIR. Based on the application of SPR AD-3, SPR HAZ-2, SPR HAZ-3, SPR HAZ-4, and consistency with the PEIR, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

SPR BIO-9 will also be implemented as part of proposed treatment design. This SPR avoids the spread or introduction of annual grasses rated as invasive by Cal-IPC or designated as noxious weeds by the California Department of Food and Agriculture. Invasive annual grasses can provide flashy fuels for wildfire ignition; however, these would be managed pursuant to SPR BIO-9 such that their establishment in treated areas will be avoided.

Addendum – Impact WIL-1

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in exacerbated fire risk and exposure to uncontrolled spread of wildfire is essentially the same within and outside the treatable landscape; therefore, the potential impact related to exacerbated risk of wildfire is less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

Impact WIL-2

Initial and maintenance treatments proposed for this project include the use of prescribed broadcast and pile burning, often on steep slopes present throughout the treatment area. The potential for post-fire related flooding or landslides was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.17.3, pages 14-15).

To minimize potential for post-fire related flooding or landslides, the following SPRs are integrated into the project design: create a burn plan using California State Parks Prescribed Burn Plan template (SPR AQ-3), stabilize mechanically disturbed soils in treatment areas (SPR GEO-3), conduct pre rainy-season inspections and monitor immediately following the first large rainfall event (SPR GEO-4), drain storm water via water breaks (SPR GEO-5), and evaluate slopes greater than 50% for unstable areas (SPR GEO-8).

The potential exposure of people or structures to post-fire landslides and flooding are within the scope of the activities and impacts covered in the PEIR because the equipment types and duration of use are consistent with those analyzed in the PEIR. Based on the application of SPR AQ-3, SPR GEO-3, SPR GEO-4, SPR GEO-5, SPR GEO-8, and consistency with the PEIR, this impact will remain less than significant. This determination is consistent with the PEIR and will not constitute a substantially more severe significant impact than covered in the PEIR.

Addendum – Impact WIL-2

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for treatments to result in post-fire landslides and flooding is essentially the

same within and outside the treatable landscape; therefore, the potential impact related to post-fire landslides and flooding is less than significant, as described above. This determination is consistent with the PEIR and would not constitute a more severe significant impact than what was covered in the PEIR.

New Impacts to Wildfire

The proposed treatment within the treatable landscape is consistent with the treatment types and activities analyzed in the CalVTP PEIR. The project proponent has evaluated and considered the site-specific characteristics to determine that the project treatments are consistent with the CalVTP PEIR's environmental and regulatory settings (CalVTP Final PEIR Volume II Sections 3.17.1 and 3.17.2), no changed circumstances would lead to new significant impacts not addressed in the PEIR.

PSA Addendum – New Impacts to Wildfire

The inclusion of land in the proposed treatment area that is outside of the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the proposed treatment project are also consistent with those considered in the PEIR. No new impact related to wildfire would occur that is not covered in the PEIR.

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Attachment A: Standard Project Requirements and Mitigation Measures Checklist

A.1 Introduction

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 Project-Specific Analysis/Addendum (PSA/Addendum) to the California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (PEIR) 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 incorporated 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 environmental protection features of later activities consistent with the CalVTP PEIR.

The San Mateo County Forest Health and Fire Resilience Public Works Plan (PWP) and the Santa Cruz County Forest Health and Fire Resilience PWP are companions 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 PWPs requires adherence to Coastal Vegetation Treatment Standards (CVTS) approved as part of the PWP and additional information about project design within the San Mateo County Coastal Zone. As the project proponent and lead agency to the PSA/Addendum under CEQA, California State Parks is responsible for the overall administration of this project-specific MMRP and ensuring compliance with the Coastal Act. However, as the project proponents and administrators of the PWP, SMRCD and RCDSCC will be consulted during all aspects of project implementation and subsequent reporting and will serve as a verifying and monitoring entity for all SPRs and Mitigation Measures occurring within the Coastal Zone. 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 directive

A.2 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 implementation entity and the entity with monitoring responsibility. The numbering of SPRs and Mitigation Measures follow 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 have been added to tailor the specific impact avoidance and minimization actions relevant to the proposed treatments, agency standard practices, and the conditions and resources present within each treatment site. In addition, non-substantive clarifying edits to Mitigation Measures in the PEIR are shown in underline and strikethrough. In all cases, the 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 PEIR.

A.3 Roles and Responsibilities

Under this CEQA document, State Parks is the project proponent and is acting as the lead agency. As the lead agency, State Parks is responsible for approving and submitting the PSA/Addendum for inclusion under the CalVTP PEIR. Additionally, for the purpose of this PSA/Addendum, State Parks is the implementing entity and is responsible for carrying out all applicable SPRs and MMs, unless noted otherwise. Save the Redwoods League and/or the Sempervirens Fund may function as implementing entities under State Parks as the Lead Agency. State Parks may partner with additional agencies or organizations on a project-by-project basis, in which implementing, verifying, or monitoring responsibilities may be shared. As project proponents of the PWPs, the San Mateo RCD and RCD Santa Cruz County are responsible for reviewing the PSA for consistency with the PWP, developing the NOID, and all other verification and monitoring requirements covered under the PWP.

The California Department of Parks and Recreation will 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.

Reporting: The California Department of Parks and Recreation 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.

A.4 Qualification Requirements for Biological and Cultural Resource Measures

The biological and cultural resource SPRs and mitigation measures in the attached MMRP table require that qualified individuals implement components of the measures. The CalVTP PEIR requirements listed below will be met to be considered qualified and may be performed by individuals of various titles (including archaeologist, biologist, botanist, ecologist, Registered Professional Forester (RPF), biological technician, or supervised designees working at the direction of a qualified professional) as long as they are qualified for the task at hand.

Archaeologically Trained Resource Professional: To be qualified, an archaeologically-trained resource professional would hold a valid Archaeological Training Certificate issued by CAL FIRE and the Board or equivalent state or local agency training or certification. Work performed by an archaeologically-trained resource professional must be reviewed and approved by a qualified archaeologist.

Qualified Archaeologist: To be qualified, an archaeologist would hold a Prehistoric Archeology, Historic Archeology, Conservation, Cultural Anthropology, or Curation degree from an accredited university and meet the Secretary of Interior's Qualifications Standards (36 CFR Part 61). The project proponent will review the resume and approve the qualifications of the archaeologists.

Qualified RPF or Biological Technician: To be qualified, an RPF or biological technician would 1) be knowledgeable in relevant species life histories and ecology, 2) be able to correctly identify relevant species and habitats, 3) have experience conducting biological monitoring of relevant species or resources, and 4) be knowledgeable about state and federal laws regarding the protection of special-status species. The project proponent will review the resume and approve the qualifications of RPFs or biological technicians.

Qualified RPF or Biologist: To be qualified, an RPF or biologist would hold a wildlife biology, botany, ecology, forestry, or other relevant degree from an accredited university and: 1) be knowledgeable in relevant species life histories and ecology, 2) be able to correctly identify relevant species and habitats, 3) have experience conducting field surveys of relevant species or resources, 4) be knowledgeable about survey protocols, 5) be knowledgeable about state and federal laws, including the Coastal Act, regarding the protection of special status species, communities, and environmentally sensitive habitat, and 6) have experience with CDFW's California Natural Diversity Database (CNDDB) and Biogeographic Information

and Observation System (BIOS). The project proponent will review the resume and approve the qualifications of RPFs or biologists. If species-specific protocol surveys are performed, surveys would be conducted by qualified RPFs or biologists with the minimum qualifications required by the appropriate protocols, including having CDFW or USFWS approval to conduct such surveys, if required by certain protocols.

Qualified RPF or Botanist: To be qualified, an RPF or botanist would 1) be knowledgeable about plant taxonomy, 2) be familiar with plants of the region, including special-status plants and sensitive natural communities, 3) have experience conducting floristic botanical field surveys as described in CDFW "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" (current version dated March 20, 2018), or experience conducting such botanical field surveys under the direction of an experienced botanical field surveyor, 4) be familiar with the California Manual of Vegetation (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/), and 5) be familiar with federal, state, and local statutes and regulations related to plants and plant collecting. The project proponent will review the resume and approve the qualifications of RPFs or botanists.

A.5 Standard Project Requirements and Mitigation Measures Checklist

- **Applicable (Yes/No).** Document whether the SPR or mitigation measure is applicable to the initial treatment and/or treatment maintenance (Yes or No), and whether it is applicable to initial treatment and/or treatment maintenance. The applicability should be substantiated in the Environmental Checklist Discussion.
- **Timing.** This column identifies the time frame in which the SPR or mitigation measure will be implemented (e.g., prior to treatment, during treatment, etc.).
- **Implementing Entity**. The implementing entity is the agency or organization responsible for carrying out the requirement. This could include the project proponent's project manager, a technical specialist (e.g., archeologist or biologist), a vegetation management contractor, a partner agency or organization, or other entities that are primarily responsible for carrying out each project requirement.
- **Verifying/Monitoring Entity**. The verifying/monitoring entity is the agency or organization responsible for ensuring that the requirement is implemented. The verifying/monitoring entity may be different from the implementing entity.

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Administrative Standard Project Requirements				
SPR AD-1 Project Proponent Coordination: For treatments coordinated with CAL FIRE, CAL FIRE will meet with the project proponent to discuss all natural and environmental resources that must be protected using SPRs and any applicable mitigation measures; identify any sensitive resources onsite; and discuss resource protection measures. For any prescribed burn treatments, CAL FIRE will also discuss the details of the burn plan in the incident action plan (IAP). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment:** Y **Treatment Maintenance:** Y	Prior	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR AD-2 Delineate Protected Resources: The project proponent will clearly define the boundaries of the treatment area and protected resources on maps for the treatment area and with highly-visible flagging or clear, existing landscape demarcations (e.g., edge of a roadway) prior to beginning any treatment to avoid disturbing the resource. "Protected Resources" refers to environmentally sensitive places within or adjacent to the treatment areas that would be avoided or protected to the extent feasible during planned treatment activities to sustain their natural qualities and processes. This work will be performed by a qualified person, as defined for the specific resource (e.g., qualified Registered Professional Forester or biologist). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR AD-4 Public Notifications for Prescribed Burning: At least three days prior to the commencement of prescribed burning operations, the project proponent will: 1) post signs along the closest public roadway to the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or smoke concerns; 2) publish a	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
public interest notification in a local newspapers or other widely distributed media source describing the activity, timing, and contact information; 3) send the local county supervisor and county administrative officer (or equivalent official responsible for distribution of public information) a notification letter describing the activity, its necessity, timing, and measures being taken to protect the environment and prevent prescribed burn escape. This SPR applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.				
SPR AD-5 Maintain Site Cleanliness: If trash receptacles are used on-site, the project proponent will use fully covered trash receptacles with secure lids (wildlife proof) to contain all food, food scraps, food wrappers, beverages, and other worker generated miscellaneous trash. Remove all temporary non-biodegradable flagging, trash, debris, and barriers from the project site upon completion of project activities. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR AD-6 Public Notifications for Treatment Projects. One to three days prior to the commencement of a treatment activity, the project proponent will post signs in a conspicuous location near the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or concerns. This SPR applies to all treatment activities and all treatment types, including treatment maintenance. Prescribed burning is subject to the additional notification requirements of SPR AD-4.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR AD-7 Provide Information on Proposed, Approved, and Completed Treatment Projects. For any vegetation treatment project using the CalVTP PEIR for CEQA compliance, the project proponent will provide the information listed below to the Board or CAL FIRE during the proposed, approved, and completed stages of the project. The Board or CAL FIRE will make this information available to the public via an online database or other mechanism. Information on proposed projects (PSA in progress): ▸ GIS data that include project location (as a point); ▸ project size (typically acres);	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior, During, and Post**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ treatment types and activities; and ▶ contact information for a representative of the project proponent. The project proponent will provide information on the proposed project to the Board or CAL FIRE as early as feasible in the planning phase. The project proponent will provide this information to the Board or CAL FIRE with sufficient lead time to allow those agencies to make the information available to the public no later than two weeks prior to project approval. The project proponent may also make information available to the public via other mechanisms (e.g., the proponent's own website). Information on approved projects (PSA complete): ▶ A completed PSA Environmental Checklist; ▶ A completed Mitigation Monitoring and Reporting Program (using Attachment A to the Environmental Checklist); ▶ GIS data that include a polygon(s) of the project area, showing the extent of each treatment type included in the project (ecological restoration, fuel break, WUI fuel reduction). Information on completed projects: ▶ GIS data that include a polygon(s) of the treated area, showing the extent of each treatment type implemented (ecological restoration, fuel break, WUI fuel reduction) ▶ A post-project implementation report (referred to by CAL FIRE as a Completion Report) that includes ▪ Size of treated area (typically acres); ▪ Treatment types and activities; ▪ Dates of work; ▪ A list of the SPRs and mitigation measures that were implemented ▪ Any explanations regarding implementation if required by SPRs and mitigation measures (e.g., explanation for feasibility determination required by SPR BIO-12; explanation for reduction of a no-disturbance buffer below the general minimum size described in Mitigation Measures BIO-1a and BIO-2b).				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
This SPR applies to all treatment activities and all treatment types, including treatment maintenance.				
Project Specific Implementation: The project proponent will comply with this SPR. In tandem with the requirements presented in SPR AD-7, in order to maintain compliance with San Mateo and Santa Cruz County's Forest Health and Fire Resilience PWPs, following completion of treatment activities, a narrative explanation of project updates as well as photo documentation will be provided to the CCC. These additional reporting requirements will be provided at the interval associated with the reporting frequency of SPR AD-7.				
SPR AD-8 Request Access for Post-Treatment Assessment. For CAL FIRE projects, during contract development, CAL FIRE will include access to the treated area over a prescribed period (usually up to three years) to assess treatment effectiveness in achieving desired fuel conditions and other CalVTP objectives as well as any necessary maintenance, as a contract term for consideration by the landowner. For public landowners, access to the treated area over a prescribed period will be a requirement of the executed contract. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior, During, and post**	**State Parks**	**State Parks / RCDSCC / SMRCD**
Project Specific Implementation: This is not a CALFIRE project, however, this project includes prescribed burning treatment activities that involve coordination with CALFIRE. Therefore, this SPR may apply. Requests to access the property for post-treatment assessments should be directed to the California Department of Parks and Recreation, Santa Cruz District.				
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to all treatment activities. Coastal Act Compliance for this project will be achieved through Coastal Commission approval of the PSA and consistency with the CVTS.**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.				
Project Specific Implementation: The project area is located within the Coastal Zone of San Mateo and Santa Cruz Counties, therefore this SPR applies to this project. Efforts have been made between the CCC, San Mateo Resource Conservation District, and Resource Conservation District of Santa Cruz County and other similar entities to develop Public Works Plans (PWPs) in each respective county that establish a set of standards for CalVTP projects occurring within the coastal zone of San Mateo and Santa Cruz Counties. The DRAFT Coastal Santa Cruz Mountains, State Parks Forest Health Initiative PSA was sent to the CCC on May 2, 2025 for review. A Coastal Vegetation Treatment Standards (CVTS) document has been filled out for this project and was submitted to the CCC on May 2, 2025 for review with the PSA. For the purposes of this document all of the Coastal Zone within the project area will be treated as ESHA. The basis of this project is to conduct ecologically restorative treatments that promote the persistence and resiliency of multiple vegetation communities and habitat types as environmentally sensitive habitat areas through a myriad of protection, conservation, and avoidance measures. The PSA/Addendum will be sent to the CCC for approval during their September hearing.				
Aesthetic and Visual Resource Standard Project Requirements				
SPR AES-1 Vegetation Thinning and Edge Feathering: The project proponent will thin and feather adjacent vegetation to break up or screen linear edges of the clearing and mimic forms of natural clearings as reasonable or appropriate for vegetation conditions. In general, thinning and feathering in irregular patches of varying densities, as well as a gradation of tall to short vegetation at the clearing edge, will achieve a natural transitional appearance. The contrast of a distinct clearing edge will be faded into this transitional band. This SPR only applies to mechanical and manual treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
SPR AES-3 Provide Vegetation Screening: The project proponent will preserve sufficient vegetation within, at the edge of, or adjacent to treatment areas to screen views from public trails, parks, recreation areas, and roadways as reasonable or appropriate for vegetation conditions. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR AQ-2 Submit Smoke Management Plan: The project proponent will submit a smoke management plan for all prescribed burns to the applicable air district, in accordance with 17 CCR Section 80160. Pursuant to this regulation a smoke management plan will not be required for burns less than 10 acres that also will not be conducted near smoke sensitive areas, unless otherwise directed by the air district. Burning will only be conducted in compliance with the burn authorization program of the applicable air district(s) having jurisdiction over the treatment area. Example of a smoke management plan is in Appendix PD-2. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR AQ-3 Create Burn Plan: The project proponent will create a burn plan using the CAL FIRE burn plan template for all prescribed burns. The burn plan will include a fire behavior model output of First Order Fire Effects Model and BEHAVE or other fire behavior modeling simulation and that is performed by a qualified fire behavior technical specialist that predicts fire behavior, calculates consumption of fuels, tree mortality, predicted emissions, greenhouse gas emissions, and soil heating. The project proponent will minimize soil burn severity from broadcast burning to reduce the potential for runoff and soil erosion. The burn plan will be created with input from a qualified technician or certified State burn boss. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Project Specific Implementation: The project proponent (California State Parks) will create a burn plan using the California State Parks Burn Plan template, which is the current department standard and includes the same, if not more, information than is required in the CAL FIRE burn plan template.				
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 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR AQ-5 Avoid Naturally Occurring Asbestos: The project proponent will avoid ground-disturbing treatment activities in areas identified as likely to contain	**Initial Treatment: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
naturally occurring asbestos (NOA) per maps and guidance published by the California Geological Survey, unless an Asbestos Dust Control Plan (17 CCR Section 93105) is prepared and approved by the air district(s) with jurisdiction over the treatment area. Any NOA-related guidance provided by the applicable air district will be followed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Treatment Maintenance: Y**			
SPR AQ-6: Prescribed Burn Safety Procedures. Prescribed burns planned and managed by non-CAL FIRE crews will follow all safety procedures required of CAL FIRE crew, including the implementation of an approved Incident Action Plan (IAP). The IAP will include the burn dates; burn hours; weather limitations; the specific burn prescription; a communications plan; a medical plan; a traffic plan; and special instructions such as minimizing smoke impacts to specific local roadways. The IAP will also assign responsibilities for coordination with the appropriate air district, such as conducting onsite briefings, posting notifications, weather monitoring during burning, and other burn related preparations. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ 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. ▶ 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: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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~~ mechanical and prescribed burning treatment activities and manual treatment activities that utilize tracked chippers beyond established road surfaces under all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Project Specific Implementation: Archaeological surveys will be completed prior to mechanical and prescribed burning operations as part of completing a full, confidential Archaeological Survey Report (ASR). Revisions to this SPR are shown in underline and/or strikethrough above.				
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 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR CUL-6 Treatment of Tribal Cultural Resources: The project proponent, in consultation with the culturally affiliated tribe(s), will develop effective protection measures for important tribal 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. The project proponent will provide the tribe(s) the opportunity to submit comments and participate in consultation to resolve issues of concern. The project proponent will defer implementing the treatment until the tribe approves protection measures, or if agreement cannot be reached after a good-faith effort, the proponent determines that any or all feasible measures have been implemented, where feasible, and the resource is either avoided or protected. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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	**Initial Treatment: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.	**Treatment Maintenance: Y**			
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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 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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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, 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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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:	**Initial Treatment: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ 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.	**Treatment Maintenance: Y**			
SPR BIO-4: Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function. Project proponents, in consultation with a qualified RPF or qualified biologist, will design treatments in riparian habitats to retain or improve habitat functions by implementing the following within riparian habitats: ▶ Retain at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation within the limits of riparian habitat identified and mapped during surveys conducted pursuant to SPR BIO-3. Native riparian vegetation will be retained in a well distributed multi-storied stand composed of a diversity of species similar to that found before the start of treatment activities. ▶ Treatments will be limited to removal of uncharacteristic fuel loads (e.g., removing dead 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 riparian vegetation types characteristic of the region. This includes hand removal (or mechanized removal where topography allows) of dead or dying riparian trees and shrubs, invasive plant removal, selective thinning, and removal of encroaching upland species. ▶ Removal of large, native riparian hardwood trees (e.g., willow, ash, maple, oak, alder, sycamore, cottonwood) will be minimized to the extent feasible and 75	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
percent of the pretreatment native riparian hardwood tree canopy will be retained. Because tree size varies depending on vegetation type present and site conditions, the tree size retention parameter will be determined on a site-specific basis depending on vegetation type present and setting; however, live, healthy, native trees that are considered large for that type of tree and large relative to other trees in that location will be retained. A scientifically-based, project-specific explanation substantiating the retention size parameter for native riparian hardwood tree removal will be provided in the Biological Resources Discussion of the PSA. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, presence of sufficient seed trees, light availability, and changes in stream shading may inform the tree size retention requirements. ▶ Removed trees will be felled away from adjacent streams or waterbodies and piled outside of the riparian vegetation zone (unless there is an ecological reason to do otherwise that is approved by applicable regulatory agencies, such as adding large woody material to a stream to enhance fish habitat, e.g., see Accelerated Wood Recruitment and Timber Operations: Process Guidance from the California Timber Harvest Review Team Agencies and National Marine Fisheries Service). ▶ Vegetation removal that could reduce stream shading and increase stream temperatures will be avoided. ▶ Ground disturbance within riparian habitats will be limited to the minimum necessary to implement effective treatments. This will consist of the minimum disturbance area necessary to reduce hazardous fuels and return the riparian community to a natural fire regime (i.e., Condition Class 1) considering historic fire return intervals, climate change, and land use constraints. ▶ Only hand application of herbicides approved for use in aquatic environments will be allowed and only during low-flow periods or when seasonal streams are dry. ▶ The project proponent will notify CDFW when required by California Fish and Game Code Section 1602 prior to implementing any treatment activities in riparian habitats. Notification will identify the treatment activities, map the vegetation to be removed, identify the impact avoidance identification methods to be used (e.g., flagging), and appropriate protections for the				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
retention of shaded riverine habitat, including buffers and other applicable measures to prevent erosion into the waterway. ▶ In consideration of spatial variability of riparian vegetation types and condition and consistent with California Forest Practice Rules Section 916.9(v) (February 2019 version), a different set of vegetation retention standards and protection measures from those specified in the above bullets may be implemented on a site-specific basis if the qualified RPF and the project proponent demonstrate through substantial evidence that alternative design measures provide a more effective means of achieving the treatment goals objectives and would result in effects to the Beneficial Functions of Riparian Zones equal or more favorable than those expected to result from application of the above measures. Deviation from the above design specifications, different protection measures and design standards will only be approved when the treatment plan incorporates an evaluation of beneficial functions of the riparian habitat and with written concurrence from CDFW. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
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 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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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. 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)				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 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:				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Mixed chaparral stands throughout the park, all of which experienced high intensity wildfire in 2020, will be allowed it to reestablish naturally post-fire. In instances where conifers are encroaching into and replacing stands of chaparral, treatments will focus on removal of encroaching conifers to maintain the extent of chaparral communities. These stands of chaparral will ideally be maintained in the future through prescribed fire as determined necessary by California State Park biologists and botanists. Chaparral exists adjacent to redwood stands within prescribed burn plots. These stands, to the extent feasible, will not be actively ignited during prescribed burns that occur at an interval more frequent than that required to maintain them as chaparral. 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 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 70 percent, post treatment shrub canopy density will be no less than 35 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.				
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., Ione 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;	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ 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). 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,	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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. 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD / California Coastal Commission**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ 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.				
Project Specific Implementation: The project area is located within the Coastal Zone of San Mateo and Santa Cruz Counties, therefore this SPR applies to this project. Efforts have been made between the CCC, San Mateo Resource Conservation District, and Resource Conservation District of Santa Cruz County and other similar entities to develop Public Works Plans (PWPs) in each respective county that establish a set of standards for CalVTP projects occurring within the coastal zone of San Mateo and Santa Cruz Counties. The DRAFT Coastal Santa Cruz Mountains, State Parks Forest Health Initiative PSA was sent to the CCC on May 2, 2025 for review. A Coastal Vegetation Treatment Standards (CVTS) document has been filled out for this project and was submitted to the CCC on May 2, 2025 for review with the PSA. For the purposes of this document all of the Coastal Zone within the project area will be treated as ESHA. The basis of this project is to conduct ecologically restorative treatments that promote the persistence and resiliency of multiple vegetation communities and habitat types as environmentally sensitive habitat areas through a myriad of protection, conservation, and avoidance measures.				
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;	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ 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; ▶ 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.				
SPR BIO-11. Install Wildlife-Friendly Fencing (Prescribed Herbivory). If temporary fencing is required for prescribed herbivory treatment, a wildlife-friendly fencing design will be used. The project proponent will require a qualified RPF or biologist to review and approve the design before installation to minimize the risk of wildlife entanglement. The fencing design will meet the following standards: ▶ Minimize the chance of wildlife entanglement by avoiding barbed wire, loose or broken wires, or any material that could impale or snag a leaping animal; and, if feasible, keeping electric netting-type fencing electrified at all times or laid down while not in use. ▶ Charge temporary electric fencing with intermittent pulse energizers; continuous output fence chargers will not be permitted. ▶ Allow wildlife to jump over easily without injury by installing fencing that can flex as animals pass over it and installing the top wire low enough (no more than approximately 40 inches high on flat ground) to allow adult ungulates to jump over it. The determination of appropriate fence height will consider slope, as steep slopes are more difficult for wildlife to pass. ▶ Be highly visible to birds and mammals by using high-visibility tape or wire, flagging, or other markers. This SPR applies only to prescribed herbivory and all treatment types, including treatment maintenance.	**Initial Treatment: N** **Treatment Maintenance: N**	**NA**	**NA**	**NA**
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	**Initial Treatment: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 identity 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 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	**Treatment Maintenance: Y**			

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 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				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 raptor nests, whether occupied or not, will be retained. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				

Project Specific Implementation: In addition, the project proponent will implement the nesting bird protocol outlined below and discussed in Impact BIO-6

Nesting Bird Protocol

Nesting bird and bat roost surveys will be required from February 1st to August 31st and shall be conducted within 7 days of any manual or mechanical operations in treatment areas by State Parks or their supervised designee to determine if nesting activity is occurring. If no active bird nests are observed during focused surveys, then additional measures will not be required. If active nests of common birds or raptors are observed during focused surveys, feasible impact avoidance strategies will be implemented to avoid disturbance to the nest, as described in SPR BIO-12. Feasible impact avoidance strategies include establishing appropriate buffers, modifying treatments to avoid disturbance, and deferring treatment until the nest is no longer active as determined by a qualified RPF or biologist. Buffers will be based upon a species' life history. Buffers will typically be between 50 and 300 feet for non-raptors and up to 500 feet or greater for raptors; based on the qualified RPF or biologists' analysis that the buffer is appropriate, buffer size may increase or decrease while still maintaining protection for the nesting bird species.

Geology, Soils, 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 and will suspend mechanical treatments when (1) it is raining, (2) soils are saturated and/or (3) soils are wet enough to be compacted by mechanical activities. 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)	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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: The project proponent will suspend targeted herbicide application if the National Weather Service forecast is a "chance" (30 percent or more averaged over each hour) of rain within the next day's 12-hour period between 6:00am – 6:00 pm. Mechanical treatment activities will be suspended under conditions (1), (2), and (3) described above. This project does not include prescribed herbivory treatment. Revisions to this SPR are shown in underline and/or strikethrough above.				
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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 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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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**	**During and Post**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR GEO-6 Minimize Burn Pile Size: The project proponent will not create burn piles that exceed 20 feet in length, width, or diameter, except when on landings, road surfaces, or on contour to minimize the spatial extent of soil damage. In addition, burn piles will not occupy more than 15 percent of the total treatment area (Busse et al. 2014). The project proponent will not locate burn piles in a Watercourse and Lake Protection Zone as defined in SPR HYD-4. This SPR applies to mechanical, manual, and prescribed burning treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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: (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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
Project Specific Implementation: This project includes mechanical treatment activities that will occur on slopes less than 50%. This SPR may apply in locations designated for equipment access between treatment areas.				
Greenhouse Gas Emissions Standard Project Requirements				
SPR GHG-1 Contribute to the AB 1504 Carbon Inventory Process: The project proponent of treatment projects subject to the AB 1504 process will provide all necessary data about the treatment that is needed by the U.S. Forest Service and FRAP to fulfill requirements of the AB 1504 carbon inventory, and to aid in the ongoing research about the long-term net change in carbon sequestration resulting from treatment activity. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During and Post**	**State Parks**	**State Parks / RCDSCC / SMRCD**
Hazardous Material 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 stabilized and fixed onsite or removed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Project Specific Implementation: Mechanical, manual, and prescribed burning crews will comply with this SPR to minimize the risk of impacts resulting from leak. The project proponent will inspect all equipment for leaks prior to treatment activities; inspect everyday thereafter until equipment is removed from the site; promptly stabilize and fix onsite or remove any leaking equipment; maintain all diesel and gasoline-powered equipment per manufacturer's specifications and in compliance with all state and federal emissions requirements during treatment projects. Revisions to this SPR are shown in underline and/or strikethrough above.				
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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; ▸ 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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:	**Initial Treatment: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▸ 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.	**Treatment Maintenance: Y**			
SPR HAZ-9 Notification of Herbicide Use in the Vicinity of Public Areas: For herbicide applications occurring within or adjacent to public recreation areas, residential areas, schools, or any other public areas within 500 feet, the project proponent will post signs at each end of herbicide treatment areas and any intersecting trails notifying the public of the use of herbicides. The signs will include the signal word (i.e., Danger, Warning or Caution), product name, and manufacturer; active ingredient; EPA registration number; target pest; treatment location; date and time of application; restricted entry interval, if applicable per the label requirements; date which notification sign may be removed; and a contact person with a telephone number. Signs will be posted prior to the start of treatment and notification will remain in place for at least 72 hours after treatment ceases. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 activities are included in Appendix HYD-1. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
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**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
SPR HYD-3 Water Quality Protections for Prescribed Herbivory: The project proponent will include the following water quality protections for all prescribed herbivory treatments: ▶ Environmentally sensitive areas such as waterbodies, wetlands, or riparian areas will be identified in the treatment prescription and excluded from prescribed herbivory project areas using temporary fencing or active herding. A buffer of approximately 50 feet will be maintained between sensitive and actively grazed areas. ▶ Water will be provided for grazing animals in the form of an on-site stock pond or a portable water source located outside of environmentally sensitive areas. ▶ Treatment prescriptions will be designed to protect soil stability. Grazing animals will be herded out of an area if accelerated soil erosion is observed. This SPR applies to prescribed herbivory treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: N** **Treatment Maintenance: N**	**NA**	**NA**	**NA**
SPR HYD-4 Identify and Protect Watercourse and Lake Protection Zones: The project proponent will establish Watercourse and Lake Protection Zones (WLPZs) within 300 feet of mechanical, manual, herbicide application, and prescribed	**Initial Treatment: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

<table>
<tr><th>Standard Project Requirements</th><th>Applicable? (Y/N)</th><th>Timing</th><th>Implementing Entity</th><th>Verifying/Monitoring Entity</th></tr>
<tr><td>burning treatment areas 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.

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

<table>
<tr><th>Water Class</th><th>Class I</th><th>Class II</th><th>Class III</th><th>Class IV</th></tr>
<tr><td>Water Class Characteristics or Key Indicator Beneficial Use</td><td>1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or
2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.</td><td>1) Fish always or seasonally present offsite within 1000 feet downstream and/or
2) Aquatic habitat for nonfish aquatic species.
3) Excludes Class III waters that are tributary to Class I waters.</td><td>No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high-water flow conditions after completion of timber operations.</td><td>Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.</td></tr>
<tr><td colspan="5">WLPZ Width (ft) – Distance from top of bank to the edge of WLPZ</td></tr>
<tr><td>< 30 % Slope</td><td>75</td><td>50</td><td rowspan="2">Sufficient to prevent the</td><td></td></tr>
<tr><td>30-50 % Slope</td><td>100</td><td>75</td><td></td></tr>
</table>
</td><td>Treatment Maintenance: Y</td><td></td><td></td><td></td></tr>
</table>

Standard Project Requirements				Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
>50 % Slope	150	100	degradation of downstream beneficial uses of water. Determined on a site-specific basis.				

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

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).
- 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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
Project Specific Implementation: Existing WLPZ's within 300 feet of the proposed mechanical, manual, herbicide application, and prescribed pile burning treatment and staging areas will be flagged prior to operations to minimize the risk of treatment activities resulting in an impact to watercourses. Revisions to this SPR are shown in underline and/or strikethrough above.				
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.				
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**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
Noise Standard Project Requirements				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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**	**State Parks**	**State Parks / RCDSCC / SMRCD**
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 and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
Recreation Standard Project Requirements				
SPR REC-1 Notify Recreational Users of Temporary Closures. If a treatment activity would require temporary closure of a public recreation area or facility, the project proponent to will coordinate with the owner/manager of that recreation area or facility. If temporary closure of a recreation area or facility is required, the project proponent will work with the owner/manager to post notifications of the closure at least 2 weeks prior to the commencement of the treatment activities. Additionally, notification of the treatment activity will be provided to the Administrative Officer (or equivalent official responsible for distribution of public information) of the county(ies) in which the affected recreation area or facility is located. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
Transportation Standard Project Requirements				
SPR TRAN-1 Implement Traffic Control during Treatments: Prior to initiating vegetation treatment activities the project proponent will work with the agency(ies) with jurisdiction over affected roadways to determine if a Traffic Management Plan (TMP) is needed. A TMP will be needed if traffic generated by the project would result in obstructions, hazards, or delays exceeding applicable jurisdictional standards along access routes for individual vegetation treatments.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
If needed, a TMP will be prepared to provide measures to reduce potential traffic obstructions, hazards, and service level degradation along affected roadway facilities. The scope of the TMP will depend on the type, intensity, and duration of the specific treatment activities under the CalVTP. Measures included in the TMP could include (but are not be limited to) construction signage to provide motorists with notification and information when approaching or traveling along the affected roadway facilities, flaggers for lane closures to provide temporary traffic control along affected roadway facilities, treatment schedule restrictions to avoid seasons or time periods of peak vehicle traffic, haul-trip, delivery, and/or commute time restrictions that would be implemented to avoid peak traffic days and times along affected roadway facilities. If the TMP identifies impacts on transportation facilities outside of the jurisdiction of the project proponent, the TMP will be submitted to the agency with jurisdiction over the affected roadways prior to commencement of vegetation treatment projects. This SPR applies to all treatment activities and treatment types, including treatment maintenance. Smoke generated during prescribed burn operations could potentially affect driver visibility and traffic operations along nearby roadways. Direct smoke impacts to roadway visibility and indirect impacts related to driver distraction will be considered during the planning phase of burning operations. Smoke impacts and smoke management practices specific to traffic operations during prescribed fire operations will be identified and addressed within the TMP. The TMP will include measures to monitor smoke dispersion onto public roadways, and traffic control operations will be initiated in the event burning operations could affect traffic safety along any roadways. This SPR applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.				
Public Services and Utilities Standard Project Requirements				
SPR UTIL-1: Solid Organic Waste Disposition Plan. For projects requiring the disposal of material outside of the treatment area, the project proponent will prepare an Organic Waste Disposition Plan prior to initiating treatment activities. The Solid Organic Waste Disposition Plan will include the amount (e.g., tons) of solid organic waste to be managed onsite (i.e., scattering of wood materials, generating unburned piles, and pile burning) and transported offsite for processing (i.e., biomass power plant, wood product processing facility, composting). If the project proponent intends to transport solid organic waste offsite, the Solid Organic Waste	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Disposition Plan will clearly identify the location and capacity of the intended processing facility, consistent with local and state regulations to demonstrate that adequate capacity exists to accept the treated materials. This SPR applies only to mechanical and manual treatment activities and all treatment types, including treatment maintenance.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Aesthetics and Visual Resources				
Mitigation Measure AES-3: Conduct Visual Reconnaissance for Non-Shaded Fuel Breaks and Relocate or Feather and Screen Publicly Visible Non-Shaded Fuel Breaks The project proponent will conduct a visual reconnaissance of the treatment area prior to implementing non-shaded fuel breaks to observe the surrounding landscape and determine if public viewing locations, including scenic vistas, public trails, and state scenic highways, have views of the proposed treatment area. If none are identified, the non-shaded fuel break may be implemented without additional visual mitigation. If the project proponent identifies public viewing points, including heavily used scenic vistas, public trails, recreation areas, and state scenic highways with lengthy views (i.e., longer than a few seconds) of a proposed non-shaded fuel break treatment area, the project proponent will, prior to implementation, attempt to identify any feasible change in location of the fuel break to reduce its visibility from public viewpoints. If no feasible location changes exist that would reduce impacts to public viewers and achieve the intended wildfire risk reduction objectives of the proposed non-shaded fuel break, the project proponent will implement, where feasible, a shaded fuel break rather than a non-shaded fuel break, if the shaded fuel break would achieve the intended wildfire risk reduction objectives. With the shaded fuel break, the project proponent will thin and feather adjacent vegetation to break up the linear edges of the fuel break and strategically preserve vegetation at the edge of the fuel break, as feasible, to help screen public views and minimize the contrast between the fuel break and surrounding vegetation.	**Initial Treatment: N** **Treatment Maintenance: N**	**NA**	**NA**	**NA**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 requirements for diesel fuels to ensure compatibility with all existing diesel engines.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
Project Specific Implementation: Due to this project occurring in the Coastal Zone of Santa Cruz County and being subject to the requirements of the Santa Cruz PWP, Project Standard 4 of the PWP shall apply to this Mitigation Measure. In alignment with Section 16.40.040 (A)(1) of the County LCP, a 200-foot no-disturbance buffer will be applied if any previously undiscovered human remains, or any artifact or other evidence of a Native American cultural site which reasonably appears to exceed 100 years of age; this modification will apply to portions of the project area that overlap with the Coastal Zone in Santa Cruz County.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 (nor use of associated accelerants) will occur within 50 feet of listed plants. For species listed under ESA or CESA, if the project proponent cannot avoid loss by implementing no-disturbance buffers, the project proponent will implement Mitigation Measure BIO-1c.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. Consideration of factors such as site hydrology, changes	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 (nor use of associated accelerants) will occur within the special-status plant buffer. A qualified RPF or botanist with knowledge of the special-status plant species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment would not maintain habitat function of the special-status plant habitat (i.e., the habitat would be rendered unsuitable) or because the loss of special-status plants would substantially reduce the number or restrict the range of a special-status plant species. If the project proponent determines the impact on special-status plants would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status plants or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-1c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants would benefit from treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required.				
Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants If significant impacts on listed or non-listed special-status plants cannot feasibly be avoided as specified under the circumstances described under Mitigation Measures BIO-1a and 1b, the project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant impacts that require compensatory mitigation and describes the compensatory mitigation strategy being implemented and how unavoidable losses of special-status plants will be compensated. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. If the special-status plant taxa are listed under ESA or CESA, the plan will be submitted to CDFW and/or USFWS (as appropriate) for review and comment. The first priority for compensatory mitigation will be preserving and enhancing existing populations outside of the treatment area in perpetuity, or if that is not an option because existing populations that can be preserved in perpetuity are not available, one of the following mitigation options will be implemented by the project proponent instead: ▶ creating populations on mitigation sites outside of the treatment area through seed collection and dispersal (annual species) or transplantation (perennial species); ▶ purchasing mitigation credits from a CDFW- or USFWS-approved conservation or mitigation bank in sufficient quantities to offset the loss of occupied habitat; and ▶ if the affected special-status plants are not listed under ESA or CESA, compensatory mitigation may include restoring or enhancing degraded	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
habitats so that they are made suitable to support special-status plant species in the future. If relocation efforts are part of the Compensatory Mitigation Plan, the plan will include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements. The following performance standards will be applied for relocation: ▶ the extent of occupied area will be substantially similar to the affected occupied habitat and will be suitable for self-producing populations. Re-located/re-established populations will be considered suitable for self-producing when: ▶ habitat conditions allow for plants to reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and ▶ reestablished habitats contain an occupied area comparable to existing occupied habitat areas in similar habitat types in the region. If preservation of existing populations or creation of new populations is part of the mitigation plan, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands and actions (e.g., the number and type of credits, location of mitigation bank or easement, restoration or enhancement actions), parties responsible for the long-term management of the land, and the legal and funding mechanisms (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity. If mitigation includes dedication of conservation easements, purchase of mitigation credits, or other offsite conservation measures, the details of these measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, funding assurances, and success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
If mitigation includes restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. If the loss of occupied habitat cannot be offset (e.g., if preservation of existing populations or creation of new populations through relocation efforts are not available for a certain species), and as a result treatment activities would substantially reduce the number or restrict the range of listed plant species, then the treatment will not qualify as within the scope of this PEIR. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit for state-listed plants), if these requirements are equally or more effective than the mitigation identified above.				
Project Specific Implementation: State Parks does not anticipate the need to apply Mitigation Measure BIO-1c to compensate for unavoidable loss due to the application of appropriate SPRs and Mitigation Measures. However, it is included in the MMRP in the case that it needs to be applied.				
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
2. Treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, CDFW and/or USFWS/NOAA Fisheries will be consulted to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species. ▶ For species listed under ESA or CESA, if the project proponent cannot avoid mortality, injury or disturbance by implementing one of the two options listed above, the project proponent will implement Mitigation Measure BIO-2c. ▶ Injury or mortality of California Fully Protected Species is prohibited pursuant to Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code and will be avoided. <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,				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained. ▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.				

Project Specific Implementation: The California red-legged frog, marbled murrelet, western snowy plover, coho salmon – central California coast ESU, steelhead – central California Coast DPS, San Francisco garter snake, and tidewater goby are ESA, CESA, or CDFW Fully Protected species that are known to occur within the project area; species-specific avoidance measures are located under Impact BIO-2 in the PSA checklist. Additionally, recommended avoidance and minimization strategies for marbled murrelet within the Santa Cruz Mountains are outlined in Attachment H.

Coho salmon – central California coast ESU, Steelhead – central California coast DPS, and tidewater goby

Pre-treatment activity surveys will determine presence of the coho salmon, steelhead, and tidewater goby. Surveys will inform appropriate avoidance measures, such as allowing the animal to pass on its own, establishing appropriate avoidance buffers, or monitoring the location of the individual(s) during operations.

Treatments will not occur in aquatic habitat, WLPZ buffers will be established for any treatments occurring in proximity to suitable habitat, and any treatments in riparian zones adjacent to aquatic habitat will require retention of at least 75 percent of the overstory and 50 percent of the understory canopy of native riparian vegetation.

Western snowy plover

Pre-treatment activity surveys will determine presence of the western snowy plover. Surveys will inform appropriate avoidance measures, such as allowing the animal to pass on its own, establishing appropriate avoidance buffers, or monitoring the location of the individual(s) during operations.

California red-legged frog

Additional avoidance measures for California red-legged frog, which will also provide protection and avoidance measures for foothill yellow-legged frog if surveys determine to be present, include:

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity

- Mechanized operations will cease for 24 hours after a rain event defined as any precipitation resulting in 0.2 inches and up to 1.0 inch in a 24-hour period, throughout the year to avoid dispersing California red-legged frog.
- Mechanized operations will cease for 48 hours after a rain event resulting in precipitation of 1.0 inch to 2.0 inches in a 24-hour period.
- Mechanized operations will cease for 72 hours after a rain event resulting in precipitation of 2.0 inches or greater in a 24-hour period.
- Hand work without the use of tracked chippers or other mechanized heavy equipment may continue following rain events.

Marbled murrelet

Per the recommendations in *Attachment H* that resulted from discussions with CDFW, USFWS, and the California Department of Parks and Recreation the following applicable recommendations will be adhered to within the project area (see *Attachment H* for a full list of recommendations that apply to additional areas within the Santa Cruz Mountains):

1. **Operational Window:** High decibel work in proximity or within areas identified as murrelet habitat, occupied or important habitat areas in the Santa Cruz Mountains may begin on August 5th and continue to March 24th, except for the following conditions:
    a. At sites that are known as prime unburned (pre-CZU Fire) habitat for marbled murrelets where the project proponent will avoid working until September 1st, unless new AV or ARU data suggests different dates when murrelets nest in these areas.
    b. High decibel work may occur year around in areas of the CZU Fire that burned at moderate-high and high severities (https://sig-gis.com/czu-lightning-complex-map/) within the CZU Fire where murrelet habitat was significantly compromised or destroyed.
2. **Working Hours:** The project proponent will not work during the dawn and dusk period in areas identified as murrelet habitat, occupied or important areas that experienced low or moderate burn severity. Work from 1.5 hours after sunrise to 1 hour before sunset between March 24th – August 5th.
3. **Noise Restrictions:** Noise restrictions should be in place that address any chronic noise production or new noise that is 30-35 dB above background. These noises should be carefully evaluated and minimized to the extent possible.
    a. Habitat Buffer: Sound analysis work and data indicates that in areas of low to moderate fire severity, where areas identified as murrelet habitat, occupied or important habitat areas in the Santa Cruz Mountains still exists, buffers can be reduced to 330 feet to allow larger handwork crews and mastication equipment to conduct forest restoration and resilience treatments greater than normal routine maintenance actions and park use, from March 24th – September 1st within marbled murrelet important areas.
4. **Strategic Planning:** The project proponent will time forestry work to occur as far from murrelet habitat in the July timeframe and work towards murrelet habitat.

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity

5. **Continued monitoring:** AV and ARU monitoring should continue in areas where these recommendations are being followed to monitor changes in murrelet behavior supporting adaptive management strategies as needed to protect the species.[11]

San Francisco garter snake

Pretreatment activity surveys will determine presence of the San Francisco garter snake and will inform appropriate avoidance measures. Treatment activities, including mechanical, manual, targeted herbicide treatments, and prescribed burning, may occur in suitable habitat, including high-trafficked upland habitat, for the SFGS; more specifically, manual and prescribed broadcast burning may occur within suitable aquatic habitat within WLPZ buffers.

The project proponent will perform focused surveys for SFGS within high-traffic upland habitats and aquatic habitat in treatments, within 7 days prior to implementation of all mechanical and manual treatment to determine whether SFGS are present. If SFGS are identified during focused surveys, the project proponent would require a biological monitor for treatment activities within or adjacent to sensitive habitat areas (e.g., streams, ponds, etc.), flagging for avoidance, and/or other measures recommended by CDFW as necessary to avoid injury to or mortality of these species. If SFGS enters a treatment area, all work would stop within 300 feet of the individual, and the snake would be allowed to leave on its own. If a SFGS enters a treatment area and will not or cannot leave on its own, the biological monitor will contact qualified CA State Parks, USFWS, or CDFW biologist with the necessary permits to determine a course of action.

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. Avoid Mortality, Injury, or Disturbance of Individuals	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

[11] Per *Attachment H*, recommendations are locally applicable to Santa Cruz District State Parks and San Mateo County Park lands including Big Basin Redwoods State Park, Portola Redwoods State Park, Butano State Park, Pescadero Creek County Park, Memorial County Park and Sam McDonald County Park. Refer to *Attachment H* for site specific information areas outside of this project area.

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ The project proponent will implement the following to avoid mortality, injury, or disturbance of individuals: For all treatment activities except prescribed burning, the project proponent will establish a no-disturbance buffer around occupied sites (e.g., nests, dens, roosts, middens, burrows, nurseries). Buffer size will be determined by a qualified RPF or biologist using the most current, commonly accepted science and will consider published agency guidance; however, buffers will generally be a minimum of 100 feet, unless site conditions indicate a smaller buffer would be sufficient for protection or a larger buffer would be needed. Factors to be considered in determining buffer size will include, but not be limited to, the species' tolerance to disturbance; the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; baseline levels of noise and human activity; and treatment activity. Buffer size may be adjusted if the qualified RPF or biologist determines that such an adjustment would not be likely to adversely affect (i.e., cause mortality, injury, or disturbance to) the species within the nest, den, burrow, or other occupied site. If a no-disturbance buffer is reduced below 100 feet from an occupied site, a qualified RPF or biologist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). ▶ No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified RPF or biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified RPF, biologist, or biological technician will be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 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.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding habitat function. A qualified RPF or biologist with knowledge of the special-status wildlife species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status wildlife species' habitat or because the loss of special-status wildlife would substantially reduce the number or restrict the range of a special-status wildlife species. If the project proponent determines the impact on special-status wildlife would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status wildlife or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the non-listed special-status wildlife would benefit from treatment in the occupied habitat area even though some of the non-listed special-status wildlife may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to non-listed special-status wildlife, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), 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.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity

Project Specific Implementation: The Santa Cruz black salamander, California giant salamander, San Francisco dusky-footed woodrat, mountain lion, black swift, western bumble bee, and northwest pond turtle are other special-status species that are known to occur within the project area; species specific avoidance measures are outlined below, as applicable, to be implemented in addition to applicable SPRs and Mitigation Measures.

Santa Cruz black salamander, California giant salamander, Black swift, Western snowy plover, and Northwestern pond turtle

Pre-treatment activity surveys will determine presence of the Santa Cruz black salamander and California giant salamander. Surveys will inform appropriate avoidance measures, such as allowing the animal to pass on its own, establishing appropriate avoidance buffers, or monitoring the location of the individual(s) during operations.

San Francisco dusky-footed woodrat

- Woodrat nests will be marked by flagging or electronic mapping where feasible (given that the nest is reasonably accessible to mark appropriately) with five (5) feet to ten (10) feet buffer that may be adjusted per a determination by a qualified RPF or biologist. Per SPR BIO-2 contractors will also be given environmental awareness training that will include information to support contractor identification of wood rat nests to maximize avoidance. If San Francisco dusky-footed woodrat nests within treatment areas cannot be avoided, nest removal may occur only outside the breeding season (January 1st - September 30th), if feasible.
- If San Francisco dusky-footed woodrat must be removed during the breeding season, they will be slowly removed by hand to determine if young are present.
- If young are present the nest material shall be replaced and the nest left alone for 2-3 weeks at which time the nest can be rechecked to verify that young are capable of independent survival before proceeding with nest dismantling.
- Nest removal efforts should not take place during inclement weather or extreme weather conditions and should take place at dusk or dawn, when woodrats are least susceptible to predators.
- Prior to nest removal, safety precautions should be employed to minimize potential human exposure to possible diseases and viruses carried by woodrats; adequate protection, such as protective clothing, equipment and tools, gloves, and appropriate masks, should be used to ensure the health and safety of humans removing the nests.
- Pursuant to Mitigation Measure BIO-2b, prescribed broadcast burning will be avoided, when feasible, in known woodrat locations during peak breeding season in mid-spring (April 15 – May 15).

Mountain lion

- Any mountain lion sightings or detections of dens or rendezvous sites will be immediately reported to CDFW.
- A 300-foot no-operations buffer will be established around active den habitat and CDFW will be notified.
    - Operations shall not commence within the no-operations buffer until appropriate buffers and mitigation measures can be determined and approved by CDFW.

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Western bumble bee As stated in CDFW's 2023 Survey Consideration for CESA Candidate Bumble Bee Species document, if surveys, such as those performed under SPR BIO-10, determine that suitable nesting, foraging, or overwintering habitat is present within the project area, then it is recommended that a biological monitor be onsite during vegetation and ground disturbing activities that occur during the queen flight period, gyne flight period, and colony active period; according to Table 1 of the CDFW document, western bumble bee's queen flight season is February-March, colony active period is April-September, and gyne flight season is October-November (CDFW, 2023). This recommendation will be implemented if a qualified biologist or RPF determines that ground disturbing treatment activities cannot feasibly avoid suitable habitat (i.e., open grassland, shrublands, and wet meadows) during the queen and gyne flight periods and colony active period; this project is designed to have ground-disturbing activities predominately in forested environments, which may avoid ideal suitable habitat. Additional site-specific measures to avoid take of this species may be developed following determinations from the implementation of SPR BIO-10.				
Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities) If the provisions of Mitigation Measure BIO-2a, BIO-2b, BIO-2d, BIO-2e, BIO-2f, or BIO-2g cannot be implemented and the project proponent determines that additional mitigation is necessary to reduce significant impacts, the project proponent will compensate for such impacts to species or habitat by acquiring and/or protecting land that provides (or will provide in the case of restoration) habitat function for affected species that is at least equivalent to the habitat function removed or degraded as a result of the treatment. Compensation may include: 1. Preserving existing habitat outside of the treatment area in perpetuity; this may entail purchasing mitigation credits and/or lands from a CDFW- or USFWS-approved entity in sufficient quantity to offset the residual significant impacts, generally at a ratio of 1:1 for habitat; and 2. Restoring or enhancing existing habitat within the treatment area or outside of the treatment area (including decommissioning roads, adding perching structures, removing existing perching structures, or removing existing movement barriers or other existing features that are adversely affecting the species). The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and:	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanisms for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. Review requirements are as follows: ▶ The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. ▶ For species listed under ESA or CESA or a California Fully Protected Species, the project proponent will submit the mitigation plan to CDFW and/or USFWS/NOAA Fisheries for review and comment. ▶ For other special-status wildlife species the project proponent may consult with CDFW and/or USFWS regarding the availability and applicability of compensatory mitigation and other related technical information. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit), if these requirements are equally or more effective than the mitigation identified above.				
Project Specific Implementation: State Parks does not anticipate the need to apply Mitigation Measure BIO-2c to compensate for mortality, injury, disturbance, or loss of habitat function for special-status wildlife due to the application of appropriate SPRs and Mitigation Measures. However, it is included in the MMRP in the case that it needs to be applied.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Mitigation Measure BIO-2d: Implement Protective Measures for Valley Elderberry Longhorn Beetle (All Treatment Activities) If elderberry shrubs within the documented range of valley elderberry longhorn beetle are identified during review and surveys for SPR BIO-1, and valley elderberry longhorn beetle or likely occupied suitable elderberry habitat (e.g., within riparian, within historic riparian, containing exit holes) is confirmed to be present during protocol-level surveys following the protocol outlined in USFWS Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (USFWS 2017) per SPR BIO-10, the following protective measures will be implemented to avoid and minimize impacts to valley elderberry longhorn beetle: ▶ If elderberry shrubs are 165 feet or more from the treatment area, and treatment activities would not encroach within this distance, direct or indirect impacts are not expected and further mitigation is not required. ▶ If elderberry shrubs are located within 165 feet of the treatment area, the following measures will be implemented: ▪ A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be fenced or flagged and maintained to avoid direct impacts (e.g., damage to root system) that could damage or kill the plant, with the exception of the following activities: – Manual trimming of elderberry shrubs will only occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects on valley elderberry longhorn beetle. – Manual or mechanical vegetation treatment within the drip-line of any elderberry shrub will be limited to the season when adults are not active (August - February), will be limited to methods that do not cause ground disturbance, and will avoid damaging the elderberry. ▪ A qualified RPF, biologist, or biological technician familiar with valley elderberry longhorn beetle and its life history will monitor the work area to verify the avoidance and minimization measures are implemented. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to valley elderberry longhorn beetle. If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of VELB or degradation of occupied habitat such	**Initial Treatment: N** **Treatment Maintenance: N**	**NA**	**NA**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.				
Mitigation Measure BIO-2e: Design Treatment to Retain Special-Status Butterfly Host Plants (All Treatment Activities) If federally listed butterflies are identified as occurring or having potential to occur during review and surveys for SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, then the following measures will be implemented: ▶ Treatment areas within the range of these species will be surveyed for the host plant for each species (Table 3.6-34). ▶ Host plants for federally listed butterflies within the occupied habitat will be marked with high-visibility flagging, fencing, or stakes, and no treatment activities will occur within 10 feet of these plants. ▶ Because prescribed herbivory could result in the indiscriminate removal of the host plants for federally listed butterflies, this treatment type will not be used within occupied habitat of any federally listed butterfly species, unless it is known that the host plant is unpalatable to the herbivore. ▶ Treatment areas that are not occupied but are within the range of the federally listed butterfly will be divided into as many treatment units as feasible such that the entirety of the habitat is not treated within the same year. ▶ Treatments will be conducted in a patchy pattern to the extent feasible in areas that are not occupied but are within the range of the federally listed butterfly, such that the entirety of the habitat is not burned or removed and untreated portions of suitable habitat are retained. If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of federally listed butterflies or degradation of occupied habitat (host plants) such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c. **CESA and ESA Listed Species.** A qualified RPF or biologist will determine if, after implementation of any feasible impact avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed butterflies or degradation of occupied habitat such	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. **Other Special-status Species.** A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA, because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status butterflies would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status butterflies or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status butterfly species would benefit from treatment in the occupied habitat area even though some may be killed, injured or disturbed during treatment activities. For a treatment to be considered beneficial to special-status butterfly species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources). If it is determined that treatment activities would be beneficial to special-status butterflies, no compensatory mitigation will be required.				

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

Butterfly Species	Host Plants
bay checkerspot butterfly	dwarf plantain (*Plantago virginica*), purple owl's clover (*Castilleja exserta*)
Behren's silverspot butterfly	blue violet (*Viola adunca*)

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

Project Specific Implementation: This project area does not contain potentially suitable overwintering habitat for monarch butterfly. If SPR BIO-10 determines presence of this species, then the specific avoidance measures for this species are outlined below:

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity

Monarch butterfly avoidance measures:

If SPR BIO-10 determines presence for overwintering sites within the project area or if presence is assumed, then the Xerces Society for Invertebrate Conservation (Xerces Society) or a qualified biologist should be consulted to develop site-specific avoidance measures to maintain existing habitat function and retention of existing nectar sources; if this species is officially listed under ESA when, or if, surveys determine presence, then USFWS will be notified with the proposed avoidance measures.

Aforementioned, the project area does not contain suitable overwintering habitat nor milkweed, however, if overwintering sites are discovered, then the following plants are recommended for retention in open areas if time and resources allow it (see below). Botanical surveys conducted prior to treatments will survey for the species listed below in and flag them appropriately for retention:

- Wax myrtle (*Morella californica)*
- Toyon (*Heteromeles arbutifolia*)
- Coffee berry (*Frangula californica*)
- Seaside fleabane (*Erigeron glaucus*)
- Coyote bush (*Baccharis pilularis)*
- Sage spp. such as black or hummingbird sage
- Mule fat (*Baccharis salicifolia*)
- Local Manzanita spp.
- *Ericameria* spp. such as rabbitbrush, goldenbush, & mock heather

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Mitigation Measure BIO-2f: Avoid Habitat for Special-Status Beetles, Flies, Grasshoppers, and Snails (All Treatment Activities) If treatment activities would occur within the limited range of any state or federally listed beetle, fly, grasshopper, or snail, and these species are identified as occurring or having potential to occur due to the presence of potentially suitable habitat during review and surveys for SPR BIO-1 and surveys for SPR BIO-10, then the following measures will be implemented: ▸ To avoid and minimize impacts to Mount Hermon June beetle and Zayante band-winged grasshopper, treatment activities will not occur within "Sandhills" habitat in Santa Cruz County, the only suitable habitat for these species.	**Initial Treatment: N** **Treatment Maintenance: N**	NA	**NA**	**NA**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ To avoid and minimize impacts to Casey's June beetle, Delhi Sands flower-loving fly (*Rhaphiomidas terminates abdominalis*), Delta green ground beetle (*Elaphrus virisis*), Morro shoulderband snail, Ohlone tiger beetle (*Cicindela ohlone*), and Trinity bristle snail, treatment activities will not occur within habitat in the range of these species that is deemed suitable by a qualified RPF or biologist with familiarity of the species. If the project proponent cannot implement the measures above to avoid mortality, injury or disturbance to listed beetles, flies, grasshoppers, and snails, or degradation of suitable habitat such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.				
Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees (All Treatment Activities) If special-status bumble bees are identified as occurring during review and surveys under SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, or if suitable habitat for special-status bumble bees is identified during review and surveys under SPR BIO-1 (e.g., wet meadow, forest meadow, riparian, grassland, or coastal scrub habitat containing sufficient floral resources within the range of the species), then the project proponent will implement the following measures, as feasible: ▶ Prescribed burning within occupied or suitable habitat for special-status bumble bees will occur from October through February to avoid the bumble bee flight season. ▶ Treatment areas in occupied or suitable habitat will be divided into a sufficient number of treatment units such that the entirety of the habitat is not treated within the same year; the objective of this measure is to provide refuge for special-status bumble bees during treatment activities and temporary retention of suitable floral resources proximate to the treatment area. ▶ Treatments will be conducted in a patchy pattern to the extent feasible in occupied or suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
unburned floral resources for special-status bumble bees within the treatment area). ▶ Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March through September). **CESA and ESA Listed Species.** A qualified RPF or biologist will determine if, after implementation of feasible avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance to the species, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed bumble bees (in the event the Candidate listing is confirmed) or degradation of occupied (or assumed to be occupied) habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. **Other Special-status Species.** A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status bumble bees would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status bumble bees or degradation of occupied (or assumed to be occupied) habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status bumble bee species would benefit from treatment in the occupied (or assumed to be				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
occupied) habitat area even though some of the non-listed special-status bumble bees may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to special-status bumble bee species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status bumble bees, no compensatory mitigation will be required.				

Project Specific Implementation: Western bumble bee is known to occur in portions of the project area. If presence of the western bumble bee is confirmed through SPRs BIO-1 and BIO-10, then this Mitigation Measure will apply.

Western bumble bee

As stated in CDFW's 2023 Survey Consideration for CESA Candidate Bumble Bee Species document, if surveys, such as those performed under SPR BIO-10, determine that suitable nesting, foraging, or overwintering habitat is present within the project area, then it is recommended that a biological monitor be onsite during vegetation and ground disturbing activities that occur during the queen flight period, gyne flight period, and colony active period; according to Table 1 of the CDFW document, western bumble bee's queen flight season is February-March, colony active period is April-September, and gyne flight season is October-November (CDFW, 2023). This recommendation will be implemented if a qualified biologist or RPF determines that ground disturbing treatment activities cannot feasibly avoid suitable habitat (i.e., open grassland, shrublands, and wet meadows) during the queen and gyne flight periods and colony active period; this project is designed to have ground-disturbing activities predominately in forested environments, which may avoid ideal suitable habitat. Additional site-specific measures to avoid take of this species may be developed following determinations from the implementation of SPR BIO-10.

Mitigation Measure BIO-2h: Avoid Potential Disease Transmission Between Domestic Livestock and Special-Status Ungulates (Prescribed Herbivory) The project proponent will implement the following measure if treatment activities are planned within the range of desert bighorn sheep, peninsular bighorn sheep, Sierra Nevada bighorn sheep, or pronghorn: ▶ Prescribed herbivory activities will be prohibited within a 14-mile buffer around suitable habitat for any species of bighorn sheep within the range of these species consistent with the more stringent recommendations in the Recovery Plan for Sierra Nevada bighorn sheep (USFWS 2007).	**Initial Treatment: N** **Treatment Maintenance: N**	**NA**	**NA**	**NA**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ Prescribed herbivory activities will be avoided within the range of pronghorn where feasible (where this range does not overlap with the range of any species of bighorn sheep).				
Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands The project proponent will implement the following measures when working in treatment areas that contain sensitive natural communities identified during surveys conducted pursuant to SPR BIO-3: ▶ Reference the *Manual of California Vegetation*, Appendix 2, Table A2, *Fire Characteristics* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/) or other best available information to determine the natural fire regime of the specific sensitive natural community type (i.e., alliance) present. The condition class and fire return interval departure of the vegetation alliances present will also be determined. ▶ Design treatments in sensitive natural communities and oak woodlands to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function of the affected sensitive natural community. Treatments will be designed to replicate the fire regime attributes for the affected sensitive natural community or oak woodland type including seasonality, fire return interval, fire size, spatial complexity, fireline intensity, severity, and fire type as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/). Treatments will not be implemented in sensitive natural communities that are within their natural fire return interval (i.e., time since last burn is less than the average time required for that vegetation type to recover from fire) or within Condition Class 1. ▶ To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled). ▶ To the extent feasible, fuel breaks will not remove more than 20 percent of the native vegetation relative cover from a stand of sensitive natural community vegetation in sensitive natural communities with a rarity rank	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
of S3 (vulnerable) or in oak woodlands. In forest and woodland sensitive natural communities with a rarity rank of S3, and in oak woodlands, only shaded fuel breaks will be installed, and they will not be installed in more than 20 percent of the stand of sensitive natural community or oak woodland vegetation (i.e., if the sensitive natural community covers 100 acres, no more than 20 acres will be converted to create the fuel break). ▶ Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/). ▶ Time prescribed herbivory to occur when non-target vegetation is not susceptible to damage (e.g. non-target vegetation is dormant or has completed its reproductive cycle for the year). For example, use herbivores to control invasive plants growing in sensitive habitats or sensitive natural communities when sensitive vegetation is dormant but invasive plants are growing. Timing of herbivory to avoid non-target vegetation will be determined by a qualified botanist, RPF, or biologist based on the specific vegetation alliance being treated, the life forms and life conditions of its characteristic plant species, and the sensitivity of the non-target vegetation to the effects of herbivory. The feasibility of implementing the avoidance measures will be determined by the project proponent based on whether implementation of this mitigation measure will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. If the avoidance measures are determined by the project proponent to be infeasible, the project proponent will document the reasons implementation of the avoidance strategies are infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). A qualified RPF or botanist with knowledge of the affected sensitive natural community will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat functions of the sensitive natural community or oak woodland. If the project proponent determines the impact on sensitive natural communities or oak woodlands would be less than significant, no further mitigation will be required. If the project proponent determines that the loss or degradation of sensitive natural communities or oak woodlands would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-3b will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the sensitive natural community or oak woodland would benefit from treatment in the occupied habitat area even though some loss may occur during treatment activities. For a treatment to be considered beneficial to a sensitive natural community or oak woodland, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the community (or similar community) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to sensitive natural communities or oak woodlands, no compensatory mitigation will be required.				
Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under Mitigation Measure BIO-3a, the project proponent will implement the following actions:	**Initial Treatment: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by: ▪ restoring sensitive natural community or oak woodland functions and acreage within the treatment area; ▪ restoring degraded sensitive natural communities or oak woodlands outside of the treatment area at a sufficient ratio to offset the loss of acreage and habitat function; or ▪ preserving existing sensitive natural communities or oak woodlands of equal or better value to the sensitive natural community lost through a conservation easement at a sufficient ratio to offset the loss of acreage and habitat function. ▶ The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on sensitive natural communities or oak woodlands that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in	**Treatment Maintenance: Y**			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan.				
Project Specific Implementation: State Parks does not anticipate the need to apply Mitigation Measure BIO-3b to compensate for the loss of sensitive natural communities and oak woodlands due to the application of appropriate SPRs and Mitigation Measures. However, it is included in the MMRP in the case that it needs to be applied.				
Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat If, after implementation of SPR BIO-4, impacts to riparian habitat remain significant under CEQA, the project proponent will implement the following: ▸ Compensate for unavoidable losses of riparian habitat acreage and function by: ▪ restoring riparian habitat functions and acreage within the treatment area; ▪ restoring degraded riparian habitat outside of the treatment area; ▪ purchasing riparian habitat credits at a CDFW-approved mitigation bank; or ▪ preserving existing riparian habitat of equal or better value to the riparian habitat lost through a conservation easement at a sufficient ratio to offset the loss of riparian habitat function and value. ▸ The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on riparian habitat that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing riparian habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
2. For restoring or enhancing riparian habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above.				
Project Specific Implementation: State Parks does not anticipate the need to apply Mitigation Measure BIO-3c to compensate for the unavoidable loss of riparian habitat due to the application of appropriate SPRs and Mitigation Measures. However, it is included in the MMRP in the case that it needs to be applied.				
Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands Impacts to wetlands will be avoided using the following measures: ▶ The qualified RPF or biologist will delineate the boundaries of federally protected wetlands according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and the appropriate regional supplement for the ecoregion in which the treatment is being implemented. ▶ The qualified RPF or biologist will delineate the boundaries of wetlands that may not meet the definition of waters of the United States, but would qualify as waters of the state, according to the state wetland procedures (California Water Boards 2019 or current procedures).	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior and During**	**State Parks**	**State Parks / RCDSCC / SMRCD**
▶ A qualified RPF or biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be	**Initial Treatment: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
determined in coordination with the qualified RPF or biologist and will depend on the type of wetland present (e.g., seasonal wetland, wet meadow, freshwater marsh, vernal pool), the timing of treatment (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species' vulnerability to the treatment activities, environmental conditions and terrain, and the treatment activity being implemented. ▸ A qualified RPF or biological technician will periodically inspect the materials demarcating the buffer to confirm that they are intact and visible, and wetland impacts are being avoided. ▸ Within this buffer, herbicide application is prohibited. ▸ Within this buffer, soil disturbance is prohibited. Accordingly, the following activities are not allowed within the buffer zone: mechanical treatments, prescribed herbivory, equipment and vehicle access or staging. ▸ Only prescribed (broadcast) burning may be implemented in wetland habitats if it is determined by a qualified RPF or biologist that: ▪ No special-status species are present in the wetland habitat ▪ The wetland habitat function would be maintained. ▪ The prescribed burn is within the normal fire return interval for the wetland vegetation types present ▪ Fire containment lines and pile burning are prohibited within the buffer ▪ No fire ignition (nor use of associated accelerants) will occur within the wetland buffer	**Treatment Maintenance: Y**			
Mitigation Measure BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites The project proponent will implement the following measures while working in treatment areas that contain nursery sites identified in surveys conducted pursuant to SPR BIO-10: ▸ **Retain Known Nursery Sites**. A qualified RPF or biologist will identify the important habitat features of the wildlife nursery and, prior to treatment activities, will mark these features for avoidance and retention during treatment ▸ **Establish Avoidance Buffers.** The project proponent will establish a non-disturbance buffer around the nursery site if activities are required while	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
the nursery site is active/occupied. The appropriate size and shape of the buffer will be determined by a qualified RPF or biologist, based on potential effects of project-related habitat disturbance, noise, visual disturbance, and other factors. No treatment activity will commence within the buffer area until a qualified RPF or biologist confirms that the nursery site is no longer active/occupied. Monitoring of the effectiveness of the non-disturbance buffer around the nursery site by a qualified RPF, biologist, or biological technician during and after treatment activities will be required. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to special-status species.				
Greenhouse Gas Emissions				
Mitigation Measure GHG-2. Implement GHG Emission Reduction Techniques During Prescribed Burns When planning for and conducting a prescribed burn, project proponents implementing a prescribed burn will incorporate feasible methods for reducing GHG emissions, including the following, which are identified in the National Wildfire Coordinating Group Smoke Management Guide for Prescribed Fire (NWCG 2018): ▶ reduce the total area burned by isolating and leaving large fuels (e.g., large logs, snags) unburned; ▶ reduce the total area burned through mosaic burning; ▶ burn when fuels have a higher fuel moisture content; ▶ reduce fuel loading by removing fuels before ignition. Methods to remove fuels include mechanical treatments, manual treatments, prescribed herbivory, and biomass utilization; and ▶ schedule burns before new fuels appear. As the science evolves, other feasible methods or technologies to sequester carbon could be incorporated, such as conservation burning, a technique for burning woody material that reduces the production of smoke particulates and carbon released into the atmosphere and generates more biochar.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
Biochar is produced from the material left over after the burn and spread with compost to increase soil organic matter and soil carbon sequestration. Technologies to reduce greenhouse gas emissions may also include portable units that perform gasification to produce electricity or pyrolysis that produces biooil that can be used as liquid fuel and/or syngas that can be used to generate electricity. The project proponent will document in the Burn Plan required pursuant to SPR AQ-3 which methods for reducing GHG emissions can feasibly be integrated into the treatment design.				
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: Y**	**Prior**	**State Parks**	**State Parks / RCDSCC / SMRCD**

Attachment B: Project Specific CEQA Findings

B.1 Environmental Review Process

The project proponent followed the evaluation and reporting process outlined the PSA and required under the CalVTP.

On June 12, 2025the Project Proponent submitted to CAL FIRE the required information regarding this project when it began preparing the PSA. The submittal included:

- GIS data that included project location (as a point);
- Project size;
- Planned treatment types and activities; and
- Contact information for a representative of the project proponent

Upon adoption of these findings and approval of the project, Project Proponent will submit this completed PSA and associated geospatial data to CAL FIRE at the time a Notice of Determination is filed. The submittal will include the following:

- The completed PSA Environmental Checklist;
- The completed Mitigation Monitoring and Reporting Program (using Attachment A to the Environmental Checklist);
- GIS data that include:
    - a polygon(s) of the project area, showing the extent of each treatment type included in the project (ecological restoration, fuel break, WUI fuel reduction)

As required under the CalVTP, Project Proponent will submit the following information to CAL FIRE after implementation of the treatment:

- GIS data that include a polygon(s) of the treated area, showing the extent of each treatment type implemented (ecological restoration, fuel break, WUI fuel reduction)
- A post-project implementation report (referred to by CAL FIRE as a Completion Report) that includes
    - Size of treated area (typically acres);
    - Treatment types and activities;
    - Dates of work;
    - A list of the SPRs and mitigation measures that were implemented; and
    - Any explanations regarding implementation if required by SPRs and mitigation measures (e.g., explanation for feasibility determination required by SPR BIO-12; explanation for reduction of a no-disturbance buffer below the general minimum size described in Mitigation Measures BIO-1a and BIO-2b.

B.2 Mitigation Monitoring and Reporting Program

A Mitigation Monitoring and Reporting Program (MMRP) was adopted by the Board for the CalVTP, and the applicable mitigation measures for this treatment project have been identified in the PSA. The Project Proponent will use the MMRP to track compliance with the CalVTP mitigation measures. The MMRP will remain available for public review during the compliance period. The Final MMRP is attached to and is approved in conjunction with the approval of the treatment project and adoption of these Findings.

B.3 Findings for Determinations of Less Than Significant

The project proponent has reviewed and considered the information in the Final PEIR for the CalVTP addressing potential environmental effects, proposed mitigation measures, and alternatives. The Project Proponent, relying on the facts and analysis in the Final PEIR and the treatment project PSA, which were presented to the Department of Parks and Recreation and reviewed and considered prior to any approvals, concurs with the conclusions of the Final PEIR and the treatment project PSA regarding the potential environmental effects of the CalVTP and the treatment project. The Project Proponent concurs with the conclusions in the Final PEIR and treatment project PSA that all of the following impacts will be less than significant:

Aesthetics and Visual Resources

- Impact AES-1: Result in Short-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from Treatment Activities
- Impact AES-2: Result in Long-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from WUI Fuel Reduction, Ecological Restoration, or Shaded Fuel Break Treatment Types

Agricultural and Forestry Resources

- Impact AG-1: Directly Result in the Loss of Forest Land or Conversion of Forest Land to a Non-Forest Use or Involve Other Changes in the Existing Environment Which, Due to Their Location or Nature, Could Result in Conversion of Forest Land to Non-Forest Use

Air Quality

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

Archaeological, Historical, and Tribal Cultural Resources

- Impact CUL-1: Cause a Substantial Adverse Change in the Significance of Built Historical Resources

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

Biological Resources

- Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife
- Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources
- Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan

Geology, Soils, and Mineral Resources

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

Greenhouse Gas Emissions

- Impact GHG-1: Conflict with Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs

Energy Resources

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

Hazardous Materials, Public Health and Safety

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

Hydrology and Water Quality

- Impact HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Prescribed Burning
- Impact HYD-2: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Manual or Mechanical Treatment Activities
- Impact HYD-3: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through Prescribed Herbivory
- Impact HYD-4: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the

Implementation of a Water Quality Control Plan Through the Ground Application of Herbicides

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

Land Use and Planning, Population and Housing

- Impact LU-1: Cause a Significant Environmental Impact Due to a Conflict with a Land Use Plan, Policy, or Regulation
- Impact LU-2: Induce Substantial Unplanned Population Growth

Noise

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

Recreation

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

Transportation

- Impact TRAN-1: Result in Temporary Traffic Operations Impacts by Conflicting with a Program, Plan, Ordinance, or Policy Addressing Roadway Facilities or Prolonged Road Closures
- Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses

Public Services, Utilities, and Service Systems

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

Wildfire

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

Cumulative

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

B.4 Significant Effects and Mitigation Measures

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

The Board adopted the findings required by CEQA for all direct and indirect significant impacts. The findings provided a summary description of each impact, described the applicable mitigation measures identified in the PEIR and adopted by the Board, and stated the Board's findings on the significance of each impact after imposition of the adopted mitigation measures. A full explanation of these environmental findings and conclusions can be found in the Final PEIR; and the Board incorporated by reference into its findings the discussion in those documents supporting the Final PEIR's determinations. In making those findings, the Board ratified, adopted, and incorporated into the findings the analyses and explanations in the Draft PEIR and Final PEIR relating to environmental impacts and mitigation measures, except to the extent any such determinations and conclusions were specifically and expressly modified by the findings.

Not every individual treatment project will have all of the significant environmental impacts that the CalVTP was determined to contribute to or cause. Additionally, some of the environmental impacts predicted by the CalVTP PEIR to be significant and unavoidable or less than significant after mitigation may be determined in a PSA to be less severe for an individual treatment project than determined in the statewide PEIR. The impacts and mitigation measures identified in Sections 8.1 and 8.2 below reflect the conclusions of the PSA by indicating which of the CalVTP's impacts that this treatment project will contribute to or cause. By indicating the project-specific effects of this treatment project as follows, the Project Proponent's decisionmaker or decision making body is hereby making the required findings under CEQA regarding the application or feasibility of mitigation measures to reduce those impacts.

B.5 Findings for Impacts Mitigated to Less Than Significant

The Project Proponent finds that changes or alterations have been required in, or incorporated into, the treatment project which avoid or substantially lessen the significant environmental effects indicated below, as identified in the Final PEIR and the PSA. Implementation of the mitigation measures indicated below to be applicable to the treatment project, which have been required or incorporated into the project, will reduce these impacts to a less than significant level. The Project Proponent hereby directs that these mitigation measures be adopted.

Biological Resources

☒ **Impact BIO-1: Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications**

- ☒ Mitigation Measure BIO-1a: Avoid Loss of Special-Status Plants Listed under ESA or CESA
- ☒ Mitigation Measure BIO-1b: Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA
- ☒ Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Tree-Nesting and Cavity-Nesting Wildlife)**

- ☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)
- ☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)
- ☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)
- ☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands
- ☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands
- ☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Shrub-Nesting Wildlife)**

- ☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)
- ☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)
- ☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)
- ☐ Mitigation Measure BIO-2d: Implement Protective Measures for Valley Elderberry Longhorn Beetle (All Treatment Activities)

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Ground-Nesting Wildlife)**

☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)

☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)

☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Burrowing and Denning Wildlife)**

☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)

☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)

☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Insects and Other Terrestrial Invertebrates)**

☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)

☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)

☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)

☐ Mitigation Measure BIO-2d: Implement Protective Measures for Valley Elderberry Longhorn Beetle (All Treatment Activities)

☒ Mitigation Measure BIO-2e: Design Treatment to Retain Special-Status Butterfly Host Plants (All Treatment Activities)

☒ Mitigation Measure BIO-2f: Avoid Habitat for Special-Status Beetles, Flies, Grasshoppers, and Snails (All Treatment Activities)

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

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Bats)**

☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)

☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)

☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Ungulates)**

☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)

☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)

☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)

☐ Mitigation Measure BIO-2h: Avoid Potential Disease Transmission Between Domestic Livestock and Special-Status Ungulates (Prescribed Herbivory)

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Fish and Aquatic Invertebrates (in wetlands, vernal pools))**

☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)

☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)

☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

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

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Amphibians and Reptiles (in wetlands, vernal pools, associated riparian))**

☒ Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)

☒ Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)

☒ Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

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

☒ **Impact BIO-3: Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation that Leads to Loss of Habitat Function**

☒ Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

☒ Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat

☒ **Impact BIO-4: Substantially Affect State or Federally Protected Wetlands**

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

☒ **Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries**

☒ Mitigation Measure BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites

Hazardous Materials, Public Health and Safety

☒ **Impact HAZ-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites**

☒ Mitigation Measure HAZ-3: Identify and Avoid Known Hazardous Waste Sites

B.6 Findings for Significant and Unavoidable Impacts

The CalVTP PEIR determined that some impacts of the program would be significant and unavoidable, even after implementation of all feasible mitigation. The Project Proponent finds that the treatment project would contribute to or cause the following significant and unavoidable impacts as indicated. Incorporating and implementing the following mitigation measures indicated to be applicable to the treatment project will reduce the severity of this impact, but not to a less-than-significant level. The Project Proponent hereby directs that these mitigation measures be adopted. The Project Proponent therefore finds that changes or alterations have been required in, or incorporated into, the treatment project that will substantially lessen, but not avoid, the significant environmental effect as identified in the PEIR and PSA.

The Project Proponent finds that fully mitigating these impacts are not feasible; there are no feasible mitigation measures beyond the mitigation measures indicated below to reduce these impacts. These impacts will remain significant and unavoidable. The Project Proponent concludes, however, that the benefits of the CalVTP and the vegetation treatment project outweigh the significant unavoidable impacts of the Program and treatment project, as set forth in the Board's Statement of Overriding Considerations the Project Proponent's own Statement of Overriding Considerations.

Aesthetics and Visual Resources

☐ **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**

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

Air Quality

☒ **Impact AQ-1: Generate Emissions of Criteria Air Pollutants and Precursors During Treatment Activities that Would Exceed CAAQS Or NAAQS and Conflict with Regional Air Quality Plans**

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

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

☒ No feasible mitigation is available.

☒ **Impact AQ-6: Expose People to Objectionable Odors from Smoke During Prescribed Burning**

☒ No feasible mitigation is available.

Archaeological, Historical, and Tribal Cultural Resources

☒ **Impact CUL-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources or Subsurface Historical Resources**

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

Biological Resources

☒ **Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications (Insects and Other Terrestrial Invertebrates - Bumble Bees)**

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

Greenhouse Gas Emissions

☒ **Impact GHG-2: Generate GHG Emissions through Treatment Activities**

☒ Mitigation Measure GHG-2: Implement GHG Emission Reduction Techniques During Prescribed Burns

Transportation

☒ **Impact TRAN-3: Result in a Net Increase in VMT for the Proposed CalVTP**

☒ No feasible mitigation is available.

Public Services, Utilities and Service Systems

☒ **Impact UTIL-2: Generate Solid Waste in Excess of State Standards or Exceed Local Infrastructure Capacity**

☒ No feasible mitigation is available.

Cumulative

Aesthetics

☐ **Cumulative Aesthetics Impact related to Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway**

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

Air Quality

☒ **Cumulative Air Quality Impact related to On-Road Vehicle and Off-Road Equipment Exhaust Emissions**

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

Archaeological, Historical, and Tribal Cultural Resources

☒ **Cumulative Archaeological, Historical, and Tribal Cultural Resources Impact related to Inadvertent Discoveries of Unique Archaeological Resources**

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

Biological Resources

☒ **Cumulative Biological Resources Impact related to Bumble Bees**

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

Transportation

☒ **Cumulative Transportation Impact related to Vehicle Miles Travelled**

☒ No feasible mitigation is available.

Public Services, Utilities and Service Systems

☒ **Cumulative Public Services, Utilities, and Service Systems Impact related to Disposal of Biomass**

☒ No feasible mitigation is available.

B.7 Statement of Overriding Considerations

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

In the Board's judgment, the CalVTP and its benefits outweigh its unavoidable significant effects. The Board's Findings were based on substantial evidence in the record. The Board's Statement of Overriding Considerations identified the specific reasons why, in the Board's judgment, the benefits of the CalVTP as approved outweigh its unavoidable significant effects.

Exercising its independent judgment and review, the Project Proponent concurs that the benefits of the CalVTP and the treatment project outweigh the significant environmental effects and hereby incorporates by reference and adopts the Board's Statement of Overriding Considerations for the CalVTP.

Any one of the reasons listed in the Statement of Overriding Considerations is sufficient to justify approval of the treatment project. Thus, even if a court were to conclude that not every reason is supported by substantial evidence, the Project Proponent would stand by its determination that each individual reason is sufficient. The substantial evidence supporting the various benefits can be found in the preceding findings, which are incorporated by reference into this section, and the documents found in the Record of Proceedings, which are described and defined in Section 5, above.

- The CalVTP will reduce dire risks to life, property, and natural resources in California.
- The CalVTP reflects the most current and commonly accepted science and conditions in California and allows for adaptation in response to potential evolution and changes in science and conditions.
- The CalVTP reflects the Board's and CAL FIRE's goals. The CalVTP will help the Board and CAL FIRE achieve their central goals for reducing and preventing the impacts of fire in the state, as outlined in the *2018 Strategic Fire Plan for California*. The CalVTP will help to establish a natural environment that is more resilient and built assets that are more resistant to the occurrence and effects of wildland fire.
- The CalVTP will help implement Executive Orders, including:
  - EO B-42-17: Governor Brown's order issued to bolster the state's response to unprecedented tree die-off through further expediting removal of millions of dead and dying trees across the state;
  - EO B-52-18: Governor Brown's order to improve forest management and restoration, provide regulatory relief, and reduce barriers for prescribed fire; and
  - EO N-05-19: Governor Newsom's order directing CAL FIRE to recommend immediate-, medium-, and long-term actions to help prevent destructive wildfires.

The Board is required by law to comply with SB 1260, signed into law by Governor Brown in February 2018, which improves California forest management practices to reduce the risk of

wildfire in light of the changing climate and includes provisions for the CalVTP PEIR to serve as the programmatic CEQA coverage for prescribed burns within the SRA. The CalVTP will bring the Board into compliance with these requirements.

The Board is required by law to comply with SB 632, signed into law by Governor Newsom in October 2019, which requires the Board to certify a Final PEIR, pursuant to CEQA, for the vegetation treatment program filed with the State Clearinghouse under Number 2019012052 in January 2019. The CalVTP will bring the Board into compliance with this requirement.

The CalVTP will help to meet California's GHG emission goals consistent with the California Forest Carbon Plan, California's 2017 Climate Change Scoping Plan, Fire on the Mountain: Rethinking Forest Management in the Sierra Nevada, and California's 2030 Natural and Working Lands Climate Change Implementation Plan.

Attachment C: Project Maps

Map 1 – PSA/Addendum Area, Coastal Zone Boundary, and Public Works Plans of San Mateo and Santa Cruz County

Map 2 – PSA/Addendum Area and CalVTP Treatable Landscape

Map 3 – PSA/Addendum Area Project Vicinity Map

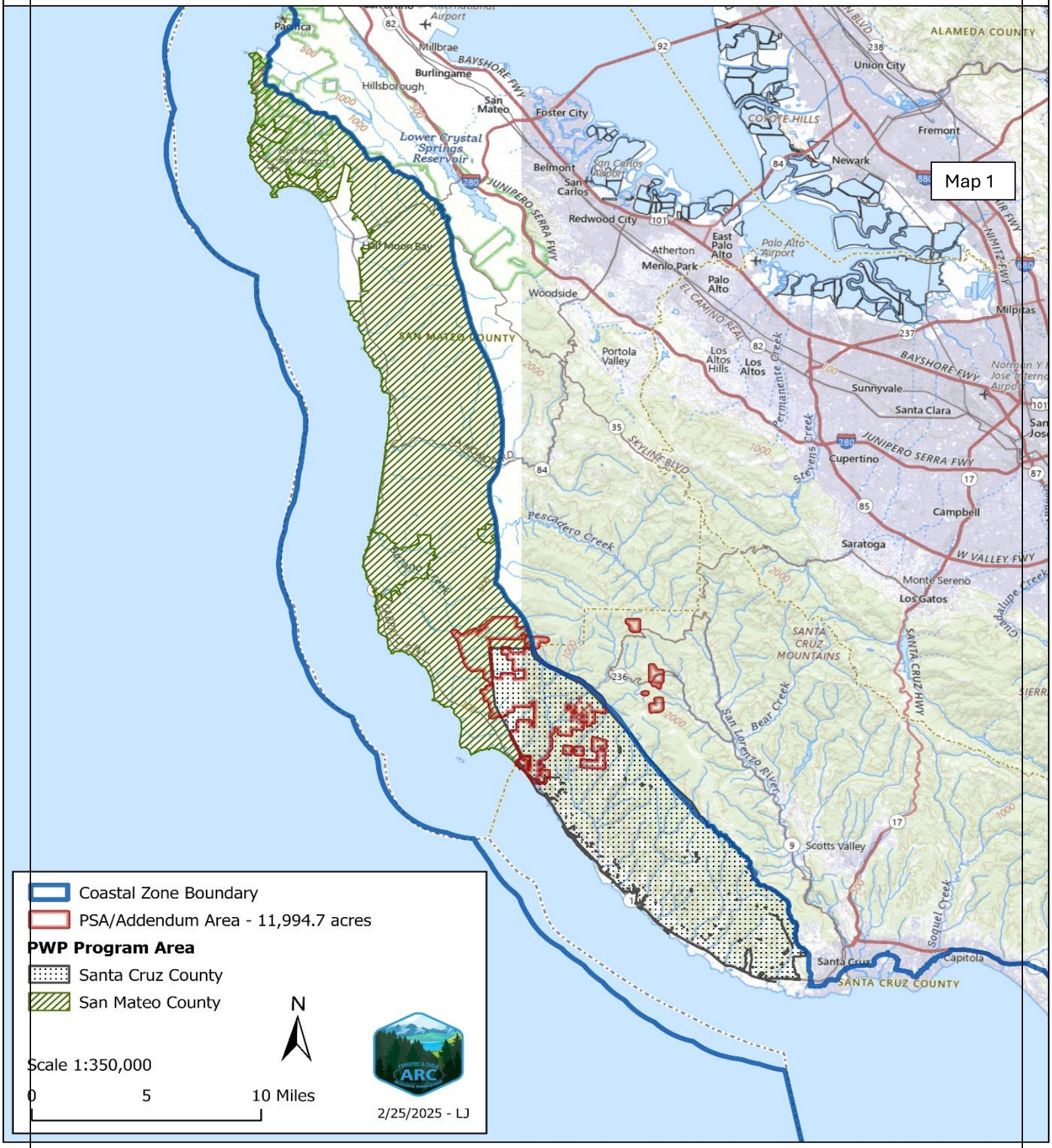
Map 4 – PSA/Addendum Area Project Location Map

Map 5 – PSA/Addendum Area Treatment Type Map

Map 6 – PSA/Addendum Area Sample Treatment Activity Map

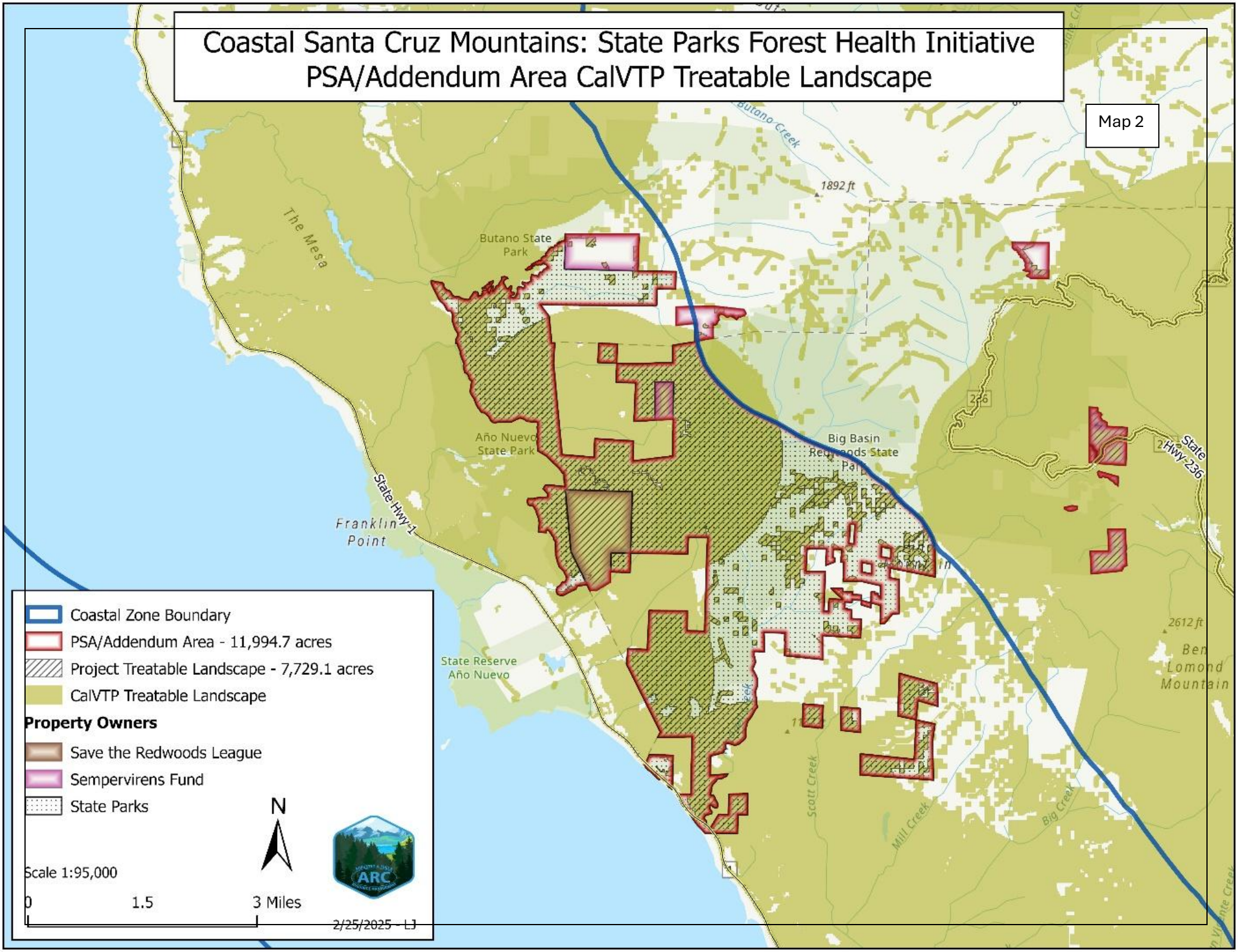
Map 7 – PSA/Addendum Area Vegetation and Fuel Types Map

Coastal Santa Cruz Mountains: State Parks Forest Health Initiative
PSA/Addendum Area Public Works Plan (PWP) Area

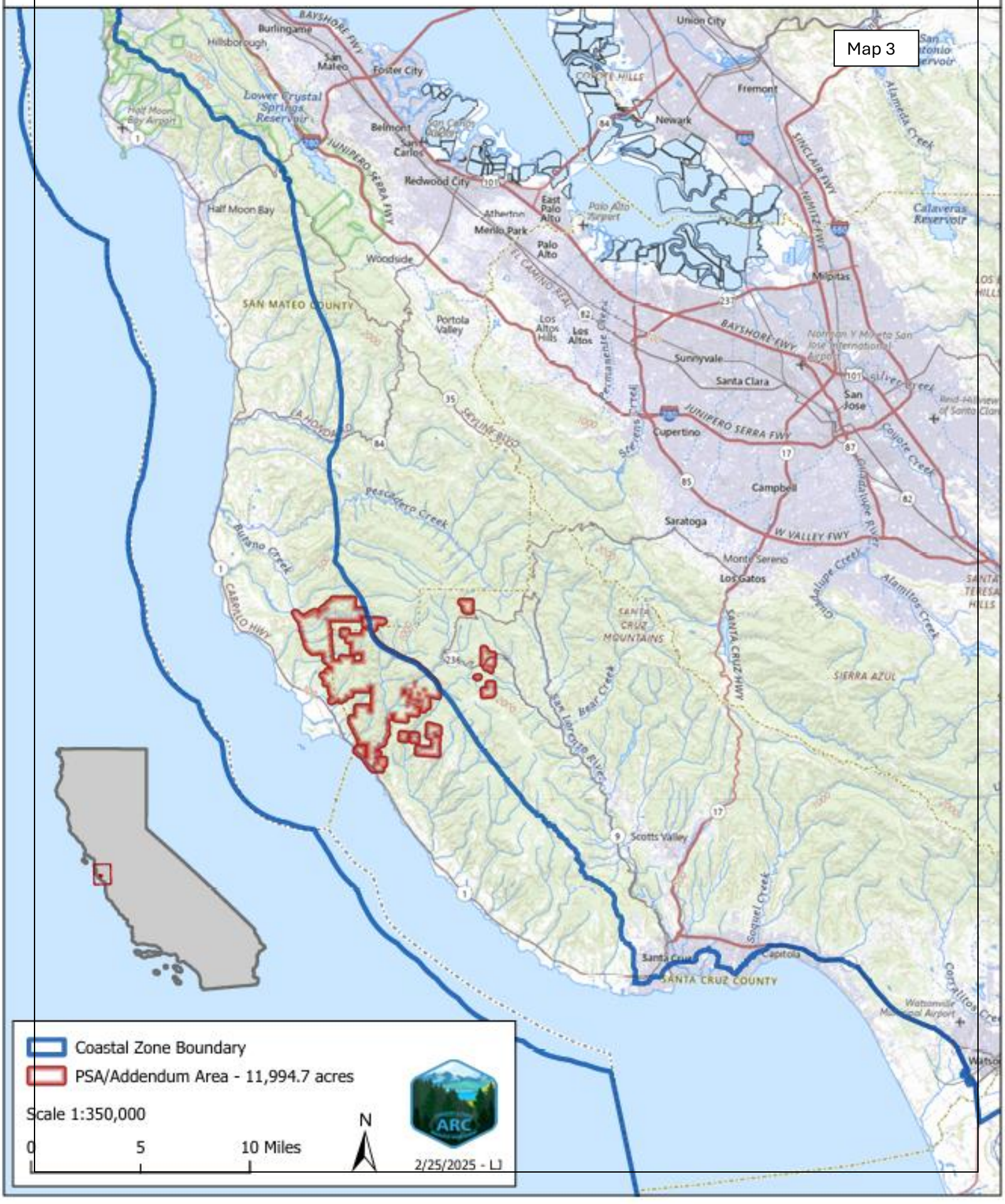


Coastal Santa Cruz Mountains: State Parks Forest Health Initiative
PSA/Addendum Area CalVTP Treatable Landscape

Map 2

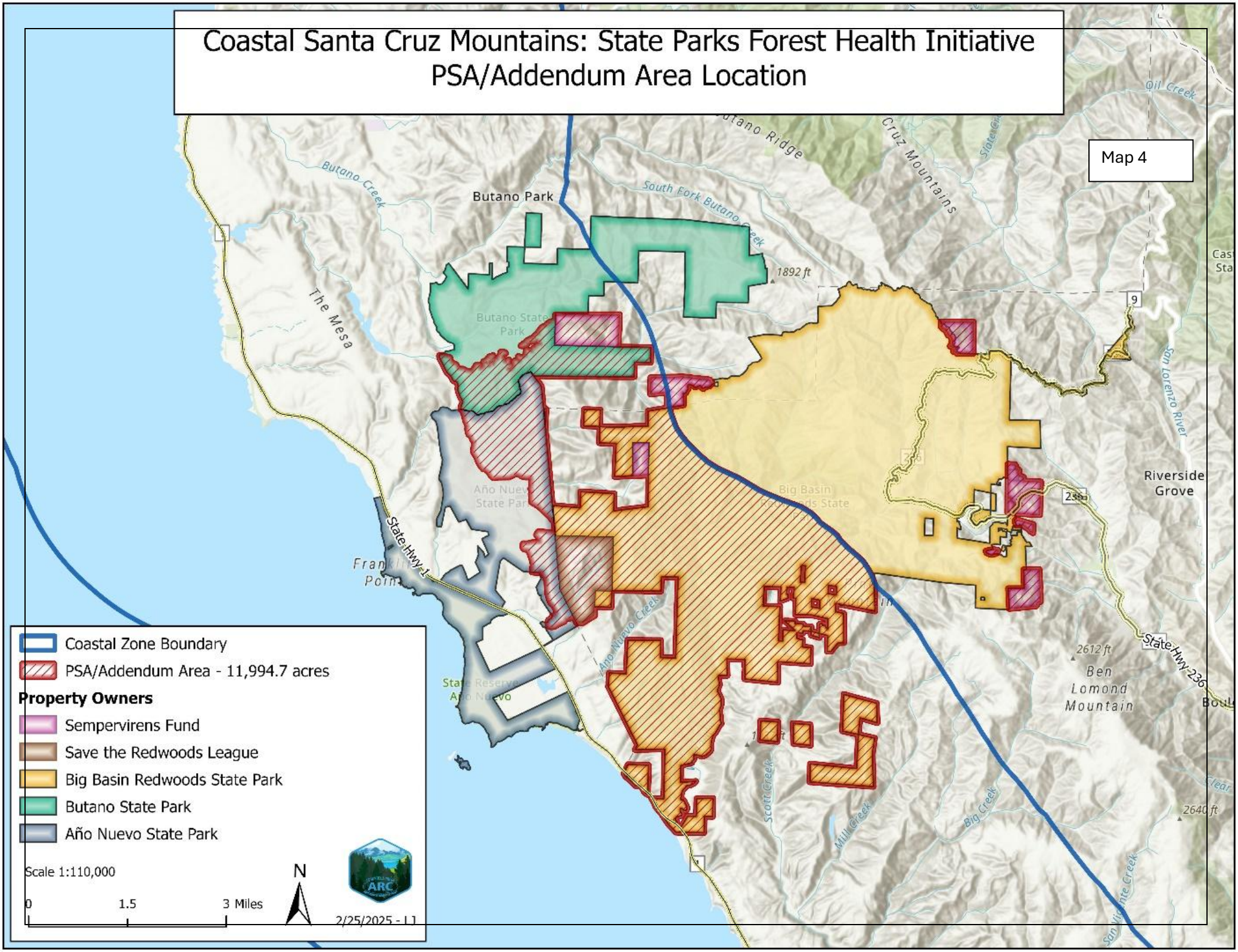


Coastal Santa Cruz Mountains: State Parks Forest Health Initiative
PSA/Addendum Area Vicinity



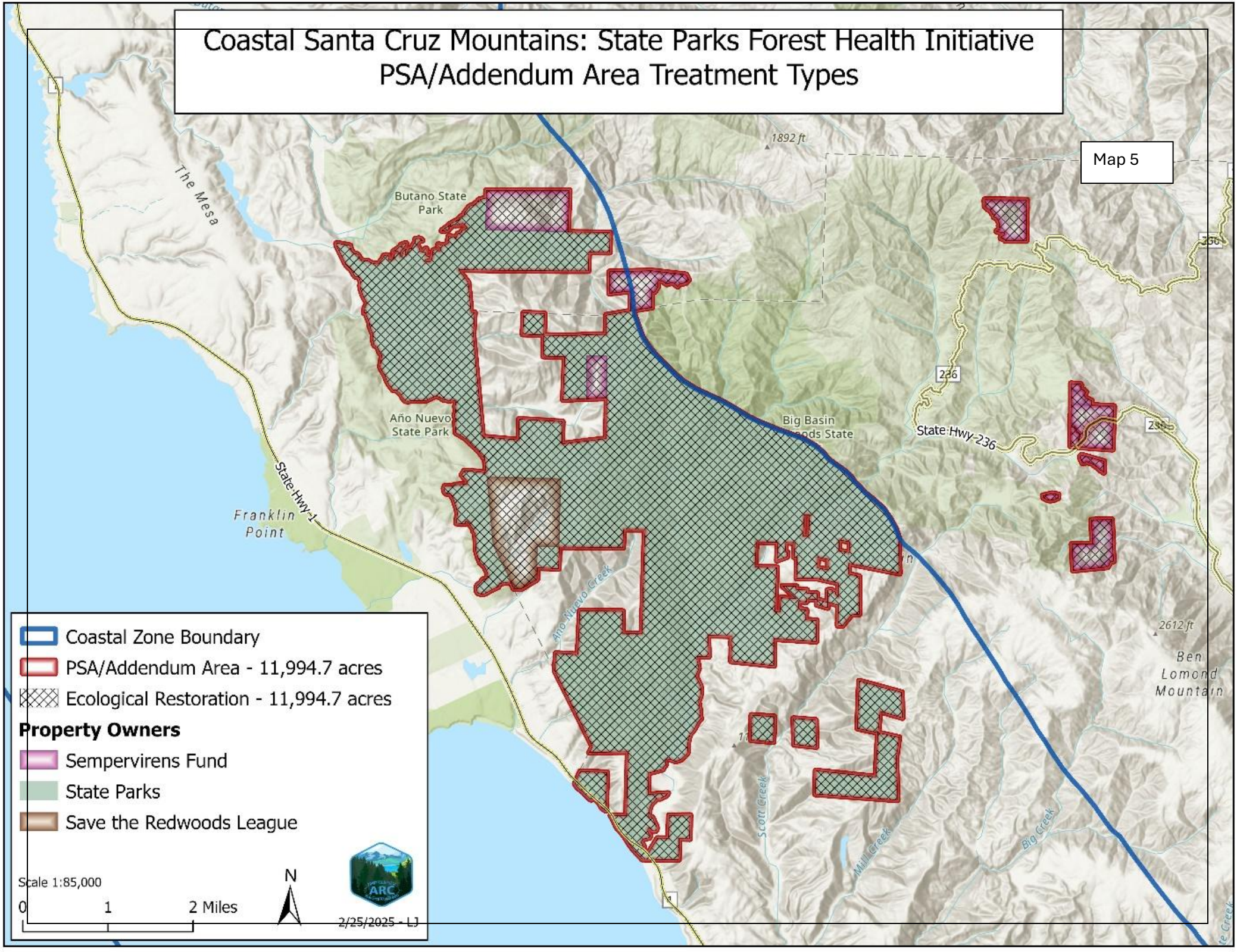
Coastal Santa Cruz Mountains: State Parks Forest Health Initiative
PSA/Addendum Area Location

Map 4



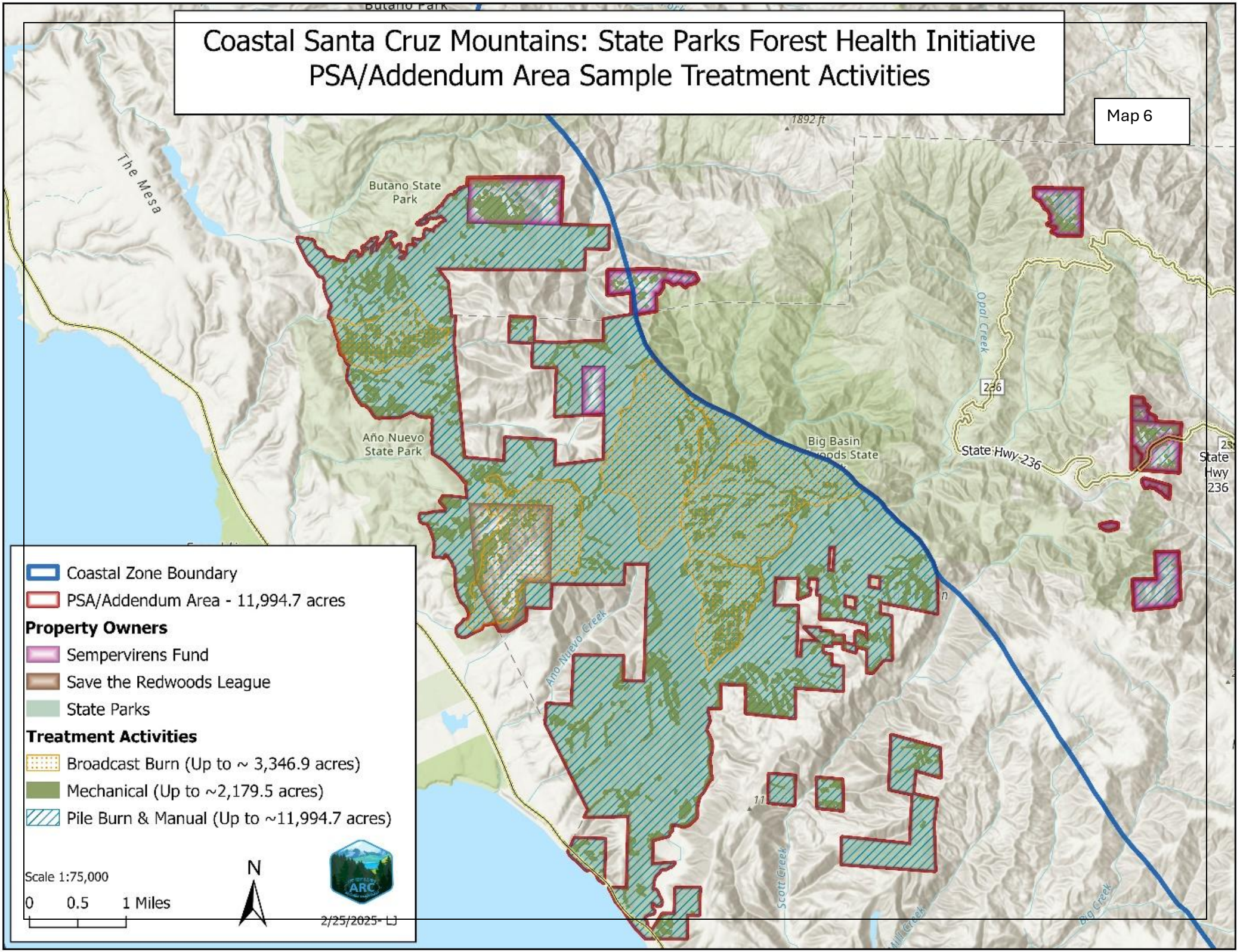
Coastal Santa Cruz Mountains: State Parks Forest Health Initiative
PSA/Addendum Area Treatment Types

Map 5

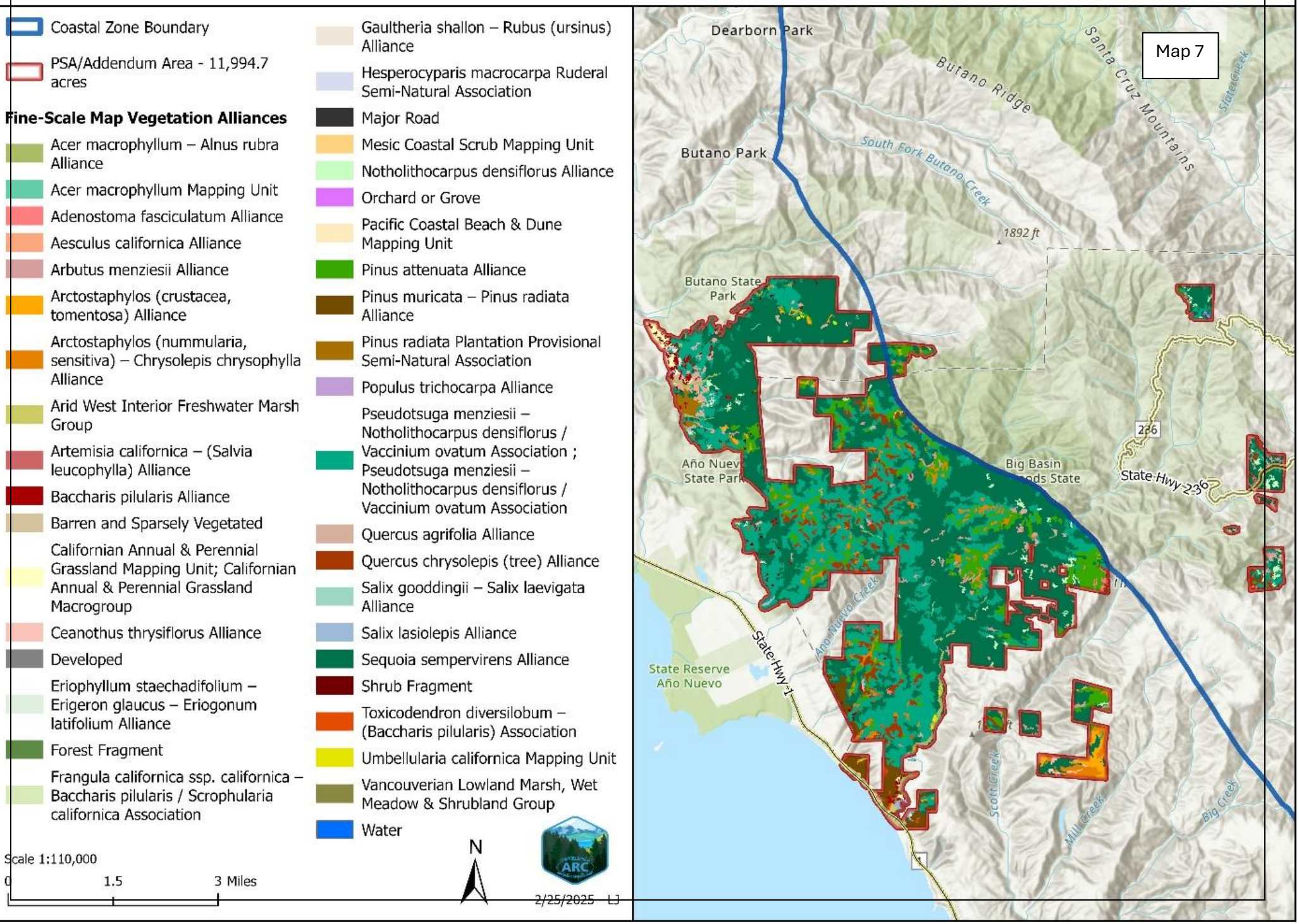


Coastal Santa Cruz Mountains: State Parks Forest Health Initiative
PSA/Addendum Area Sample Treatment Activities

Map 6



Coastal Santa Cruz Mountains: State Parks Forest Health Initiative
PSA/Addendum Area Vicinity Vegetation Types



Attachment D: Biological Resources Species List and Analysis

The California Natural Diversity Data Base (CNDDB), Biogeographic Information and Observation System (BIOS) 6, was used to identify the state and federally listed species that may be present within the 12 United State Geological Survey (USGS) 7.5' Quadrangles that surround the project area. The search yielded 96 federal and state threatened, endangered, or candidate species, CDFW species of special concern and candidate species, and the California Native Plant Society's (CNPS) California Rare Plant Rank (CRPR) List 1 and 2.

There are seven special-status plants that are known to occur within the project properties. These include Monterey pine (*Pinus radiata)*, San Francisco campion (*Silene verecunda ssp. verecunda*), San Francisco collinsia (Collinsia multicolor), Anderson's manzanita (Arctostaphylos andersonii), Choris' popcornflower (*Plagiobothrys chorisianus var. chorisianus*), pine rose (*Rosa pinetorum*), Santa Cruz microseris (*Stebbinsoseris decipiens*). There are 52 special status plant species that have potentially suitable habitat within the project property but have no known occurrences.

There are 14 special-status wildlife that are known to occur within the project properties. These include Santa Cruz black salamander (*Aneides niger)*, western bumble bee (*Bombus occidentalis*), marbled murrelet (*Brachyramphus marmoratus*), western snowy plover (*Charadrius nivosus nivosus*), black swift (*Cypseloides niger*), California giant salamander (*Dicamptodon ensatus*), coho salmon - central California coast ESU (*Oncorhynchus kisutch pop. 4*), steelhead - central California coast DPS (*Oncorhynchus mykiss irideus pop. 8*), foothill yellow-legged frog - central coast DPS (*Rana boylii pop. 4*), and California red-legged frog (*Rana draytonii*). There are 23 special status wildlife species that have potentially suitable habitat within the project property but have no known occurrences.

Botanical Species

Blasdale's bent grass (*Agrostis blasdalei*)



Description/ Status:

Agrostis blasdalei, or Blasedale's bentgrass, is a perennial grass-like herb endemic to California and listed as a 1B.2 species under the CRPR. This species grows in tufts that reach up to approximately 1 ft (0.3 m) tall and has small, rigid, in-rolled leaves. The inflorescence is a thin cylindrical array of spikelets that are brown to tan in coloration. Blasedale's bentgrass blooms May to July.

Habitat:

This species favors full sun coastal dunes, coastal bluff scrub, and coastal prairie areas as well as sandy or gravelly soil close to rocks, often in nutrient-poor soil with sparse vegetation. Occurs from 16 to 1198 ft (5 to 365 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Año Nuevo, Davenport, Santa Cruz OE W, and Pigeon Point USGS 7.5' Quadrangles.

bent-flowered fiddleneck (*Amsinckia lunaris*)



Status/Description:

The bent-flowered fiddleneck, or *Amsinckia lunaris*, is a flowering herb listed as a 1B.2 species under the CRPR. This species can reach approximately 4 ft (1.2 m) in height and has an erect, slender stem that slightly coils near the flowers. The flowers are tubular with lobed edges and are yellow or orange in color with two dark spots.

Habitat:

This species grows in openings on gravelly slopes of serpentine soils and favors valley grassland and foothill woodland communities usually under 2625 ft (800 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 5 miles of the project area in the Año Nuevo and Davenport USGS 7.5' Quadrangles.

Robbins' broomrape (*Aphyllon robbinsii*)

Status/Description:



Robbins' broomrape, or *Aphyllon robbinsii*, is short-statured reaching about 1.6 to 6 in (4 to 15 cm) tall and has a simple or few-branched, hairy stem. The flowers are tubular, light-colored pink to purple interior venation. Robbins' broomrape blooms from April to July.

Habitat:

This species grows in sandy or loose soils of coastal bluffs typically below 328 ft (100 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 5 miles of the project area, and beyond 5 miles within CNDDB search area, in the Pigeon Point and Santa Cruz OE W USGS 7.5' Quadrangles.

Anderson's manzanita (*Arctostaphylos andersonii*)

Description/ Status:



Arctostaphylos andersonii, or Anderson's manzanita, is a shrub species endemic to the Santa Cruz Mountains of California listed as a 1B.2 species under the CRPR. This species is tree-like and can reach 7 to 16 ft (2 to 5 m) in height, is covered with bristles, and has pink, urn-shaped flowers that bloom in early to late spring. The bark is smooth and dark brown-red in coloration with alternate, oblong, heart-shaped leaves.

Habitat:

This species grows in openings in redwood forests or near forest edges, usually below 2300 ft (700 m) elevation. The Anderson manzanita favors hot areas in broadleaved upland forests, chaparral communities, and North coast coniferous forests.

Proximity/ Potential for Occurrence:

Known to Occur. This species has an occurrence recorded adjacent to Pine Mountain Road in proximity to Pine Mountain within the project area.

Schreiber's manzanita (*Arctostaphylos glutinosa)*

Description/ Status:



Arctostaphylos glutinosa, or Schreiber's manzanita, is a shrub species endemic to the Santa Cruz Mountains of California listed as a 1B.2 species under the CRPR. This species is tree-like and can reach 3 to 7 ft (1 to 2 m) in height, is covered with bristles, and has pink, urn-shaped flowers that bloom in early to late spring. The bark is smooth and dark brown-red in coloration with alternate, oblong, heart-shaped leaves. This species typically blooms January to March.

Habitat:

This species mostly grows in siliceous shale outcrops, chaparral, and knobcone-pine woodland usually 590 to 2133 ft (180 to 650 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 1 mile of the project area, located approximately south of the project area along ridges between West Waddell Creek and Boyer Creek, and adjacent to Empire Grade Road and Brown Creek. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Davenport USGS 7.5' Quadrangle.

Ohlone manzanita (*Arctostaphylos ohloneana*)

Description/Status:

Ohlone manzanita, or *Arctostaphylos ohloneana* is shrub endemic to the Santa Cruz Mountains that is ranked as a 1B.1 species on the CRPR. This erect shrub can reach 7 to 14 ft (2 to 4 m) tall and consists of dense foliage that is generally smooth, with very small hairs. The flowers are cone-shaped and make up a cluster of white or pink flowers. This species typically blooms from February to March.



Habitat:

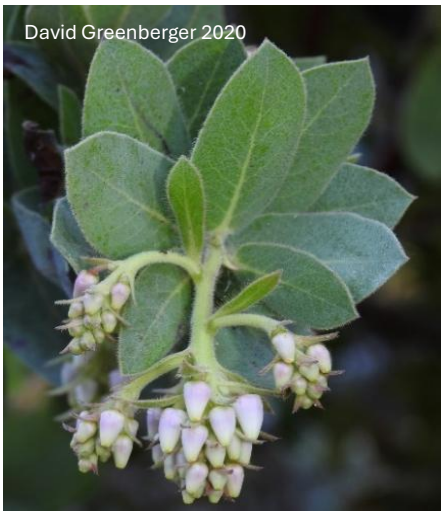
This species generally grows on siliceous shale outcrops in chaparral, knobcone-pine woodland from about 1475 to 1740 ft (450 to 530 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known to occur within 1 mile of the project area, located approximately south of the project area, immediately adjacent to Mill Creek, between Mill Creek and Boyer Creek, and along a ridgetop immediately adjacent to the project area boundary between Scott Creek and Bertoli Drive. Known occurrence within 5 miles of project area in the Davenport USGS 7.5' Quadrangle.

King's mountain manzanita (*Arctostaphylos regismontana)*

Description/Status:



The King's mountain manzanita, or *Arctostaphylos regismontana,* is shrub endemic to California that is ranked as a 1B.2 species on the CRPR. This erect shrub can reach 7 to 14 ft (2 to 4 m) tall and consists of dense foliage that is bristly and exudes sticky resins. The flowers are cone-shaped and make up a cluster of white or pink flowers. King's Mountain manzanita blooms December to April.

Habitat:

Arctostaphylos regismontana grows in openings on granite or sandstone outcrops with fast-draining soils. It favors full sun and low moisture habitats within chaparral, broadleaf, or coniferous forests between 787 to 2313 ft (240 to 705 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of the project area, and beyond 5 miles of project area within CNDDB search area, in the Big Basin, Mindego Hill, and Woodside USGS 7.5' Quadrangles.

Bonny doon manzanita (*Arctostaphylos silvicola*)

Description/Status:



Ohlone manzanita, or *Arctostaphylos ohloneana* is shrub endemic to the Santa Cruz Mountains that is ranked as a 1B.2 species on the CRPR. This erect shrub can reach 3 to 9.8 ft (1-3 m) tall and consists of dense foliage that is sparsely to densely covered in short hairs. Flowers are cone-shaped and make up a cluster of white or pink flowers. This species blooms February to March.

Habitat:

This species grows on weathered sandstone soils in chaparral and conifer forest typically less than 1969 ft (600 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of the project area, and beyond 5 miles of project area within CNDDB search area, in the Big Basin, Davenport, Castle Rock Ridge, and Felton USGS 7.5' Quadrangles.

Marsh sandwort (*Arenaria paludicola)*

Description/Status:

Marsh sandwort (*arenaria paludicola)* is endangered federally and in the state of California. It's listed on the California rare plant ranking of 1B.1. The flowers are white, 5-parted, solitary in the axils of the scarcely reduced leaves. Pedicels are 0.8 to 2 in (2-5 cm) long and reflexed in fruit. Sepals are 3-4 mm long, green, lanceolate, and pointed at the tip, with visible veins. Petals are oblong to ovate, measuring 5-6 mm, up to twice as long as the calyx. Filaments are fused at the extreme base, and there are three styles. The flowering period is from May through August.



Habitat:

Marsh sandwort is known to occur in marshes, swamps, and areas that are wet year-round. There are reports of it growing up through dense mats of reeds, cattails, rushes, and bull rushes (CDFW, 2013). It has been found in areas with shallow standing water and without standing water. It can grow in saturated bog soils and sandy substrates.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrences within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area in the Felton and Santa Cruz USGS 7.5' Quadrangles.

Humboldt County milk-vetch (*Astragalus agnicidus)*

Description/Status:



Humbolt county milk-vetch (*Astragalus agnicidus)* is listed as endangered within the state of California and has a ranking of 1B.1 on the California rare plant ranking. Humbolt county milk-vetch Milkvetch, a perennial herb, typically has a lifespan ranging from 5 to 10 years. Its coarse reddish stem, slightly hairy towards the tips, can grow between 1 to 3 ft (0.3 to 1 m) in length. The leaves, widely spaced and arranged oppositely along the stem, reach up to 6.3 in (16 cm) in length and consist of several pairs of oval-shaped leaflets, each approximately 2 centimeters long. The inflorescence forms a dense cluster comprising 10 to 40 white pealike flowers. As for the fruit, it takes the form of a bent legume capsule, measuring 1 to 1.5 centimeters in length, which eventually dries to a papery texture (CPC, n.d. and CPC, 2008).

Habitat:

This is an early successional species that thrives on disturbance. It was initially found on range land that was actively grazed, soon after, it was found on ridges where logging had occurred.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area in the Felton USGS 7.5' Quadrangle.

coastal marsh milk-vetch (*Astragalus pycnostachyus var. pycnostachyus)*

Description/Status:



Coastal marsh milk-vetch, or, *Astragalus pycnostachyus var. Pycnostachyus*, is ranked as a 1B.2 species on the CRPR. This perennial herb is erect, has a smooth reddish, stem and hairy, compound leaves. Inflorescences are white to yellow in color. The fruit is glabrous with 2 to 5 ovules. This species blooming period ranges from June to September (Wojciechowski and Spellenberg, 2023).

Habitat:

This species is typically found in coastal marshes, seeps, adjacent sand less than 492 ft elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of the project area, and beyond 5 miles of project area within CNDDB search area, in the San Gregorio and Pigeon Point USGS 7.5' Quadrangles.

Santa Cruz Mountains pussypaws (*Calyptridium parryi var. hesseae)*

Description/Status:



Santa Cruz Mountains pussypaws, or, *Calyptridium parryi var. hesseae*, is ranked as a 1B.1 species on the CRPR. This species is a short-statured, succulent species with pinkish stems and green leaves. The flowers are about 2 cm long composed of ovate sepals and the fruits are less than 2 mm in length. This species typically blooms April to July (Guilliams and Miller, 2014).

Habitat:

This species typically inhabits sandy soils in chaparral, oak woodland, and conifer forest from about 1967 to 3445 ft elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Big Basin and Davenport USGS 7.5' Quadrangles.

bristly sedge *(Carex comosa)*

Description/Status:



Bristly sedge, or, *Carex comosa*, is ranked as a 2B.1, species on the CRPR. This species grows in a cluster with stems fused or packed together and reaches a height of 1.5 to 3.5 ft (0.5 to 1 m) tall. The inflorescence is composed of spikelets on long, nodding stalks with flowers bracts generally white or cream with a pale red center. The fruit is about 1.5 to 2 mm long and 0.7 to 1.1 mm wide; fruiting time for this species is typically July to September.

Habitat:

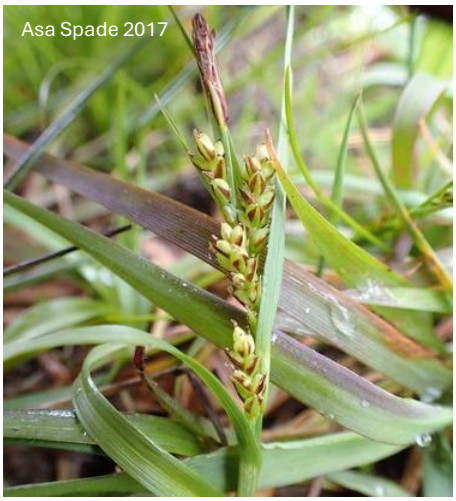
This species primarily inhabits wet areas less than 1312 ft (400 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Davenport USGS 7.5' Quadrangle.

deceiving sedge *(Carex saliniformis)*

Description/Status:


Asa Spade 2017

Deceiving sedge, or, *Carex saliniformis*, is ranked as a 1B.2, species on the CRPR. This species grows in a cluster with stems fused or packed together with grass-like leaf blades 2 to 5 mm wide. The inflorescence contains up to four lateral female spikelets and one terminal male spikelet along a slender stem that can reach to about 6 in (15 cm) in height; the spikelets are generally white or cream with a pale red center. The Deceiving Sedge can be observed blooming between May to July (Bregoff, n.d.).

Habitat:

This species is rhizomatous and typically grows within wet soils in open habitats or openings within forested habitats. It hosts at least 5 butterfly/moth species. This species generally habits marshes, pond shores, wet openings less than 820 ft elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Felton USGS 7.5' Quadrangle.

Ben Lomond spineflower (*Chorizanthe pungens var. hartwegiana)*

Description/Status:


Dylan Neubauer 2007

Chorizanthe pungens var. hartwegiana, or the Ben Lomond spineflower, is federally endangered and a California rare plant ranking of 1B.1 species. This annual herb is erect with hairy, reddish stems. Leaves are oblanceolate and forma a basal rosette at the lowest nodes. The cymose inflorescence is surrounded by pink to purple bracts with tube-shaped, lobed flower that ranges from white to pink in coloration (Neubauer, 2016).

Habitat:

The Ben Lomond spineflower grows in marine sand deposits within sandhill chapparal communities and lower montane coniferous forests usually below 610 meters elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area approximately east of project area along Boulder Creek and State Highway 236 adjacent to Boulder Creek Golf and Country Club. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area in the Big Basin, Felton, Davenport, and Laurel USGS 7.5' Quadrangles.

Scotts Valley spineflower *(Chorizanthe robusta var. hartwegii)*

Description/Status:

The Scotts Valley spine flower *(Chorizanthe robusta var. hartwegii)* is categorized as endangered on the federal listing. This species is a low growing herb with rose pink margins and grows upright. The flower heads are medium sized ranging from 1 to 1.5 cm in diameter and aggregate. Each flower produces a single seed which is commonly 3.5 to 4.0 mm long. There are hooks along the spine which surround the seed to aid in dispersal (Santa Cruz Public Libraries, n.d.).



Habitat:

Scotts Valley spine flower is found in sedimentary deposits of sandstone and mudstone.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of the project area. Known occurrence beyond 5 miles within CNDDB search area, in the Felton USGS 7.5' Quadrangle.

Robust spineflower *(Chorizanthe robusta var. robusta)*

Description/Status:



The robust spine flower *(Chorizanthe robusta var. robusta)* is classified as endangered on the federal listing and has a rating of 1B.1 on the California rare plant ranking. This species can either grow decumbent or erect with, with a maximum height of a half of meter. Its coloration is gray with mild tomentose. The inflorescence is comprised of multiple flowers, each flower is made of white or pink hook shaped bracts. The flowers are small totaling in just a few millimeters (Neubauer, 2007).

Habitat:

This species is found inland or coastal on marine sand deposits and sandstone outcrops. It is also found in openings in maritime chaparral, or sandy annual herb-dominated flats.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of the project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Felton USGS 7.5' Quadrangle.

Franciscan thistle (*Cirsium andrewsii*)

Description/ Status:



Cirsium andrewsii, or the Franciscan thistle, is listed as a CRPR 1B.2 species and is a perennial herb endemic to California. It produces an erect, leafy stem which can reach two meters in height. It produces one to a few flower heads which contain bright red tubular flowers from March through July.

Habitat:

Franciscan thistle inhabits coastal bluff scrub, broadleaved upland forest, coastal scrub, coastal scrub habitats, and sometimes on serpentine seeps below 492 ft in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, located approximately west of the project area within Año Nuevo State Reserve adjacent to Greek Oaks Creek.

San Francisco Collinsia (*Collinsia multicolor)*



Description/ Status:

San Francisco Collinsia, or, *Collinsia multicolor,* is listed as a CRPR 1B.2 species. This species generally grows 1 to 2 ft (0.3 to 0.6 m) tall with a loosely branched and weak stem. The leaves grow clasping around the stem and the inflorescences are composed of bright purple to white corollas. This species typically blooms March to May.

Habitat:

This species generally inhabits northern coastal scrub, closed-cone pine forest, and moist, shady scrub less than 984 ft (300 m) in elevation.

Proximity/ Potential for Occurrence:

Known to occur. This species has known occurrence within the project area off of State Highway 1, along Canyon Road in proximity to Theodore J. Hoover Natural Preserve. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Año Nuevo and Davenport USGS 7.5' Quadrangles.

Tear drop moss (*Dacryophyllum falcifolium*)

Description/ Status:



Tear drop moss, or, *Dacryophyllum falcifolium*, is a moss that is native and endemic to California and is listed as a CRPR 1B.3 species. *Dacryophyllum falcifolium* grows prostrate stems 1.5 cm in length. The foliage consists of small, glossy leaves that are light to yellow-green; usually strongly falcate leaves with serrulate to serrate leaf margins (Ireland, 2005).

Habitat:

This species typically inhabits the north coast coniferous forest found from 165 to 900 ft (50 to 275 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of the project area. Known occurrences beyond 5 miles of project area within CNDDB search area, in the Felton and Santa Cruz USGS 7.5' Quadrangles.

swamp harebell (*Eastwoodiella californica)*

Description/ Status:



Swamp harebell, or, *Eastwoodiella californica* is a perennial rhizomatous herb that is native to California. It's short-statured with simple, opposite leaves with light purple to pale flowers. This species typically blooms from June to October.

Habitat:

This species is typically found in bogs, closed-cone coniferous forest, coastal prairie, meadows, marshes generally from 5 to 1330 ft (1.5 to 405 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of the project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Felton USGS 7.5' Quadrangle.

Ben lomond buckwheat *(Eriogonum nudum* var. *decurrens)*

Description/ Status:

Ben lomond buckwheat *(Eriogonum nudum var. decurrens)* is a perennial herb that is native to California, and endemic to California. This species grows about 3.3 to 6.7 ft (1 to 2 m) tall, has sparse foliage, and has spherical inflorescences that are typically white to pink in color.



Habitat:

This species is endemic to the Santa Cruz sandhills from about 295 to 656 ft (90 to 200 m) elevation. This species typically blooms from June to October.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of the project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Davenport and Felton USGS 7.5' Quadrangles.

San Mateo woolly sunflower (*Eriophyllum latilobum*)

Description/Status:

Eriophyllum latilobum, or the San Mateo woolly sunflower, is state and federally endangered and is listed as a 1B.1 species under the CRPR. This flowering herb can reach up to 3 ft (1 m) tall and has triangularly lobed leaves. The inflorescence is comprised of ray and disc flowers that are yellow in coloration that is encompassed with acute phyllaries (CDFW, n.d.).



Habitat:

This species favors oak woodlands and grows in foothill woodland, cismontane woodland, coastal scrub, lower montane coniferous forest usually in elevations between 148 and 1083 ft (45 and 330 m).

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, and beyond 5 miles of project area, in the Mindego Hill and La Honda USGS 7.5' Quadrangles.

sand-loving wallflower (*Erysimum ammophilum*)

Description/ Status:

Erysimum ammophilum, or Sand-loving wallflower, is a perennial herb endemic to California and is listed as a CRPR 1 B.2 listed species. It grows to approximately 4 ft (1.2 m) tall and produces a bright yellow flower cluster with 12-20 flowers. Sand-loving wallflower blooms February to June.



Habitat:

Erysimum ammophilum is an uncommon beach-dwelling wildflower that can be found in chaparral (maritime), coastal dunes, coastal scrub and sanding openings below 197 ft (60 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area. Located approximately within Año Nuevo State Reserve adjacent to Greek Oaks Creek and State Highway 1.

Santa Cruz wallflower (*Erysimum teretifolium*)

Description/Status:



The Santa Cruz wallflower (*Erysimum teretifolium*) is labeled as Endangered on the federal and state listing. When this species is young, it is a rosette of low narrow green and purple leaves. As the plant matures it transitions to having narrow leaves on the flower stock. The flowers blossom from February through May with four-petaled yellow flowers.

Habitat:

The Santa Cruz wall flower is endemic to the Santa Cruz sandhills. The soil is nutrient poor throughout the coarse sand. This species grows in well-spaced areas, away from dense vegetation. The Santa Cruz wallflower commonly grows in areas of disturbed soil because it is free of vegetation and leaf litter (CDFW, 2017).

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of the project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Davenport, Felton, and Laurel USGS 7.5' Quadrangles.

minute pocket moss (*Fissidens pauperculus*)

Description/Status:



Fissidens pauperculus, or the minute pocket moss, is listed as a 1B.2 species under the CRPR. This species has oblong leaves that are strongly folded and light green to dark green in coloration. The leaves consist of the 3 parts including the strongly folded lamina, apical lamina, and dorsal lamina.

Habitat:

Minute pocket moss grows in redwood forests and north coast coniferous forests on bare damp soil banks along the coast, and in dry streambeds and stream banks between 33ft to 3360 ft (10 to 1024 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area. Located approximately north and immediately adjacent to project area boundary in Butano State Park Ben Ries Campground. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the La Honda, Mindego Hill, and Felton USGS 7.5' Quadrangles.

fragrant fritillary (*Fritillaria liliacea)*

Description/Status:

Fritillaria liliacea, or the fragrant fritillary, is a herb endemic to California and listed as a 1B.2 species under the CRPR. This bulb wildflower can grows up to approximately 1 ft (0.3 m) tall and has an erect stem that bends at the flower. The flower has 6 white petals with green stripes in the center. The fragrant fritillary typically blooms February to April.



Habitat:

This species favors full sun openings in coastal prairie, valley grasslands, cismontane woodland, and often on serpentine although with various other soils reported; usually on clay, in grassland communities usually between 10 to 1312 ft (3 to 400 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area in the Franklin Point USGS 7.5' Quadrangle.

Toren's grimmia (*Grimmia torenii*)

Description/ Status:

Grimmia torenii, or Toren's grimmia, is a moss that is listed as a 1B.3 species under the CRPR. This species reaches approximately 1.5 cm in length and appears green, grey-green, opaque-green, to black in coloration. The leaves are ovate-lanceolate with entire to incurved margins. The urns are erect and symmetrical and smooth to slightly wrinkled when dry.

Habitat:

This species favors rocky openings within chaparral, cismontane woodland, and lower montane coniferous forest communities between 1066 to 3806 ft (325 to 1160 m) in elevation.


Belinda Lo 2020

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 1 mile of project area, located in Big Basin Redwoods State Park in proximity to Pine Mountain, along China Grade Road in the northern portion of Big Basin Redwoods State Park, and adjacent to Empire Grade Road and Eagle Rock. Known occurrences within 5 miles of project area in the Big Basin USGS 7.5' Quadrangle.

vaginulate grimmia (*Grimmia vaginulata*)

Description/ Status:

Grimmia vaginulata, or Vaginulate grimmia, is a moss that is listed as a 1B.1 species under the CRPR. This species was recently classified/discovered in 2011. It is characterized by its very small plants that are clustered while both wet and dry (Kellman, 2011).


Kellman 2011

Habitat:

This species favors limestone, rocky openings, boulder and rock walls open chapparal between 2247 and 3724 ft (684 to 1135 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, in the Big Basin USGS 7.5' Quadrangle.

short-leaved evax (*Hesperevax sparsiflora var. brevifolia*)

Description/ Status:

Hesperevax sparsiflora var. brevifolia, or the short-leaved evax, is a an annual herb that is native to California, and also found in Oregon. This species is generally small statured, 3 to 9 cm tall with round and woolly leaves. The florescence are composed of distal heads and generally blooms from March to July.



Habitat:

This species primarily inhabits coastal strand, northern coastal scrub, and sandy, grassy or wooded coastal bluffs, terraces and dunes less than 328 ft (100 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, located along Jamison Creek Road and Jamison Road.

Santa Cruz cypress (*Hesperocyparis abramsiana var. Abramsiana*)

Description/ Status:



Hesperocyparis abramsiana var. abramsiana is a tree endemic to California and is listed as a 1B.2 species under the CRPR. It is also listed as threatened Federally and Endangered by the state of California. Small trees to 15 m tall, sparingly branched when young; bark fibrous, thin, broken in thick vertical strips or plates, gray-brown; needles scale-like, bright to deep green; male cones 3 to 4 mm long by 2 mm wide, quadrangular, pollen sacs 4 to 6 per scale; mature seed cones 16 to 25 mm long, 14 to 22 mm wide, spheric to generally widely elliptic, brown, scales 8 to 10, seed 3 to 5 mm (Neubauer Hesperocyparis, 2007).

Habitat:

Sandy or gravelly, low-nutrient soils generally derived from sandstone or granite in chaparral or knobcone pine (*Pinus attenuata*) forest surrounded by coast redwood (*Sequoia sempervirens*) forest or stands of Pacific ponderosa pine (*Pinus ponderosa var. pacifica*); 370 to 760 m.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area adjacent to Eagle Rock in Big Basin Redwoods State Park. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Big Basin, Davenport, and Felton USGS 7.5' Quadrangles.

Loma Prieta hoita (*Hoita strobilina*)



Description/ Status:

Hoita strobilina, or Loma Prieta hoita, a perennial herb that is native to California, and endemic (limited) to California. This species grows erect up to about 1 m. Leaves are lanceolate to round shaped and flowers are white to dark purple in color. This species typically blooms May to July.

Habitat:

This species typically grows in chaparral and oak woodland in less than 1969 ft (600 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Castle Rock Ridge and Cupertino USGS 7.5' Quadrangles.

Kellogg's horkelia (*Horkelia cuneata var. sericea*)



Description/Status:

Kellogg's horkelia, or *Horkelia cuneata var. sericea*, is a perennial herb that is native to California, and endemic (limited) to California. It has a California rare plant rank of 1B.1. This species has opposite, lobed leaves covered in dense to nonglandular hairs. The flowers are pink or white and dense to open; the clusters contain several to many flowers with pedicels generally 1--12 mm (Ertter, 2012).

Habitat:

This species grows in northern coastal scrub, coastal sage scrub, closed-cone pine forest, dunes, and sandhills typically less than 656 ft (200 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Año Nuevo, Davenport, and Felton USGS 7.5' Quadrangles.

Point reyes horkelia (*Horkelia marinensis*)

Description/Status:

Horkelia marinensis, or Point reyes horkelia, is a perennial herb that is native to California, and endemic (limited) to California. It has a California rare plant rank of 1B.1. This species grows in a matted arrangement typically up to 1 ft (0.3 m) tall and has a resinous odor. The compound leaves are generally 4 to 10 cm with leaflets each about 7 to 12 mm long. The flowers are dense with indistinct clusters and pedicels generally 1-6 mm (Calflora, n.d.).



Habitat:

This species grows in coastal strand, northern coastal scrub and coastal prairie typically less than 656 ft (200 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Año Nuevo, Davenport, Felton, and Santa Cruz USGS 7.5' Quadrangles.

Perennial goldfields (*Lasthenia californica ssp. Macrantha)*

Description/Status:

Lasthenia californica ssp. Macrantha, or Perennial goldfields is a perennial herb that is native to California and found only slightly beyond California borders. It has a California rare plant rank of 1B.2. This species has fibrous roots which are generally not clustered. The stem is generally branched at the base with linear to oblong leaves about 2.8 to 8.8 cm long. The flower head is about 1 cm in length with silver to gray glabrous fruit. This species flowers year-round but mostly from May to August (Chan & Ornduff, 2012).



Habitat:

This species typically inhabits grassland, dunes, and immediately along the coast less than 1640 ft (500 m) elevation. This species blooms year-round, but mostly May to August.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area in the Pigeon Point and San Gregorio USGS 7.5' Quadrangles.

legenere *(Legenere limosa)*

Description/Status:

Legenere limosa, or legenere is an annual herb that is native to California, and endemic (limited) to California. It has a California rare plant rank of 1B.2. This species is terrestrial and glabrous with a reclining stem that grows between 10 to 30 cm; lateral branches erect, slender, stiff, fleshy or not. The leaves are narrow and cauline. The flowers are racemes and about 6 to 12 mm long. This species typically flowers from May to June (Morin, 2012).


Ramona Robinson 2019

Habitat:

This species typically inhabits wet areas, vernal pools, and ponds less than 3117 ft (950 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Mindego Hill USGS 7.5' Quadrangle.

Rose Leptosiphon *(Leptosiphon rosaceus*)

Description/Status:

Leptosiphon rosaceus, or Rose Leptosiphon is an annual herb that is native to California. It has a California rare plant rank of 1B.1. This short-stemmed herb has narrowly obovate to linear leaves with rounded tips and an inflorescence that consists of fused petals that are pink to yellow to white in coloration and glabrous sepals. This species typically flowers from April to June (Patterson & Battaglia, 2021).



Habitat:

This species grows on open, grassy slopes, and coastal bluffs typically less than 330 ft (100 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area in the San Gregorio and Pigeon Point USGS 7.5' Quadrangles.

Point Reyes meadowfoam (*Limnanthes douglasii spp. sulphurea)*

Description/Status:

Limnanthes douglasii spp. sulphurea, or the Point Reyes meadowfoam, is an annual herb endemic to California. It has a California rare plant rank of 1B.2. The Point Reyes meadowfoam can reach approximately 1.6 ft (0.5 m) tall and develops yellow flowers that consist of five notched, or heart-shaped, petals with yellow anthers. The leaflets are ovate and irregularly toothed or lobed. This species blooms May to July.



Habitat:

This species favors full-sun locations within wetland and coastal prairie communities on the edges of meadows, freshwater-marshes, and vernal-pools, generally below 3,300 ft (1,005 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area in the Franklin Point USGS 7.5' Quadrangle.

arcuate bushmallow (*Malacothamnus arcuatus var. arcuatus*)

Description/Status:



Malacothamnus arcuatus var. arcuatus, or the arcuate bush-mallow, is a perennial evergreen shrub endemic to California. It has a California rare plant rank of 1B.2. This woody, multi-stemmed shrub is erect reaching up to 16 ft (5 m) in height with densely tomentose, or wooly stems, and leaves. This species has clusters of rose-like flowers that are pink and encompassed by wooly sepals and leaves. This species blooms April to September.

Habitat:

This species favors habitats in early-successional or post-burn slopes within chaparral and cismontane woodland communities between 3 to 2411 ft (1 in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, located adjacent to State Highway 236 and N Escape Road in Big Basin Redwoods State Park. Known occurrences beyond 5 miles of project area within CNDDB search area, in the La Honda, Mindego Hill, and Cupertino USGS 7.5' Quadrangles.

Marsh silverpuffs *(Microseris paludosa)*

Description/Status:



Microseris paludosa, or Marsh silverpuffs is a perennial herb endemic to California. It has a California rare plant rank of 1B.2. This species generally grows up to 2.3 ft (0.7 m) tall, mostly branched and leafy only near base. The leaves are 5 to 35 cm and entire to lobed. This species features involucre inflorescence 10 to 20 mm long with bright yellow to orange ligules. This species generally blooms from April to June (Chambers, 2012).

Habitat:

This species typically inhabits closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland and occurs from 16 to 984 ft (4.8 to 300 ft) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the San Gregorio, Pigeon Point, Año Nuevo, and Felton USGS 7.5' Quadrangles.

northern curly-leaved monardella (*Monardella sinuata ssp. Nigrescens)*

Description/Status:



Monardella sinuata ssp. Nigrescens or, northern curly-leaved monardella is an annual herb that is native to California with a California rare plant ranking of 1B.2. This species generally grows compact and highly branched with the red-brown stem growing from 3 to 26 in (8 to 65 cm) tall. The dark purple to lavender colored flowers grow in clusters of one to many per main stem. The northern curly-leaved monardella blooms from April to September (Calflora, n.d.).

Habitat:

This species typically inhabits chaparral, coastal dunes, coastal scrub, lower montane coniferous forest less than 985 ft (300 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence within CNDDB USGS Quadrant search. Located approximately southeast of project area adjacent to Highway 17 along Scotts Valley Drive in Scotts Valley, adjacent to W Zayante Road and Mount Hermon Road, adjacent to Quail Hollow Quarry Conservation Areas and W Zayante Road, and within Quail Hollow Ranch County Park along Quail Hollow Road.

woodland woollythreads (*Monolopia gracilens*)

Description/Status:

Monolopia gracilens, or woodland woollythreads is an annual herb that is native and endemic (limited) to California with a California rare plant rank of 1B.2. This species is short-statured with an erect stem growing up to about 12 cm tall. The flower heads are made up of ray slightly lobed, yellow ray flowers. Woodland woollythreads typically blooms February to July (Calflora, n.d.)



Habitat:

This species typically inhabits broad-leafed upland forest (openings), chaparral (openings), cismontane woodland, north coast coniferous forest (openings), valley and foothill grassland from about 330 to 3935 ft (100 to 1200 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the La Honda, Mindego Hill, Cupertino, Big Basin, Castle Rock Ridge, Felton, and Santa Cruz USGS 7.5' Quadrangles.

Kellman's bristle moss (*Orthotrichum kellmanii*)

Description/Status:

Orthotrichum kellmanii or, Kellman's bristle moss is a moss that is native and endemic (limited) to California. This moss grows up to 1 cm tall with primary stems creeping, vegetative and fertile stems erect (Norris et al, 2001).



Habitat:

This species typically inhabits chaparral, cismontane woodland, and sandstone outcrops with high calcium concentrations from eroded boulders out of non-calcareous sandstone bedrock from about 1125 to 2247 ft (343 to 685 ft) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area along China Grade Road adjacent to State Highway 236 in the northeastern portion of Big Basin Redwoods State Park. Known occurrence within 5 miles of project area in the Big Basin USGS 7.5' Quadrangle.

Dudley's lousewort (*Pedicularis dudleyi*)

Description/Status:


Asadotzler

Pedicularis dudleyi, or Dudley's lousewort, is a perennial herb with a California rare plant rank of 1B.2. This species is woolly, single or multi-stemmed and reaches approximately 1 ft (0.3 m) in height. The leaves are divided into lobed leaflets. The inflorescence, a raceme, consists of club-shaped flowers with upper and lower lips that are white or pink to purple in coloration. This species is a hemi-parasite; It attaches its roots to a much larger tree and uses its nutrients. This amount used by the Dudley's lousewort is so minimal that the host tree remains unaffected (Neubauer and Brumbaugh, 2015).

Habitat:

Dudley's lousewort grows in chaparral, cismontane woodlands, north coast coniferous forests, and valley or foothill grasslands usually in elevations under 2952 ft (900 m).

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area in the Mindego Hill and Big Basin USGS 7.5' Quadrangles.

Santa Cruz mtns. Beardtongue (*Penstemon rattanii*)

Description/Status:



Penstemon rattanii var. kleei or, Santa cruz mtns. Beardtongue is a perennial herb that is native and endemic (limited) to California with a California rare plant rank of 1B.2. It grows erect up to about 1 m tall with opposite, bright green leaves and tubular-shaped purple flowers. This species blooms from about May to June (Wetherwax & Holmgren, 2012).

Habitat:

This species typically appears after disturbance and inhabits closed-cone-pine forest, chapparal, and oak woodland from 80 to 605 ft (25 to 185 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, approximately southeast of project area along Bertoli Drive adjacent to Empire Grade Road. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Felton USGS 7.5' Quadrangle.

white-rayed pentachaeta *(Pentachaeta bellidiflora)*

Description/Status:



The white-rayed pentachaeta *(Pentachaeta bellidiflora)* is endangered federally and in the state of California. It is also listed 1B.1 on the California rare plant ranking. The white-rayed pentachaeta a small annual plant with small, white daisy-like flowers that typically bloom from March to May. They have one or a few branches with narrow, linear leaves. Plants are 2.3 to 6.6 in (5.8 to 16.7 cm) tall. Each head of the flower has 16 to 38 very small yellow flowers in the middle, while 7 to 16 ray flowers extend from the disk. Each ray has a white or purplish petal (CDFW, 2014 and USFWS White-rayed Pentachaeta, n.d.).

Habitat:

White-rayed pentacheta grows in serpentine soil grassland between 120 to 2,000 ft (37 to 610 m). Serpentine soils are high in magnesium, and low in nitrogen. This makes up of nutrients typically limits the amount of plants that grow in these soils, consequently reducing the competition.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 1 mile of project area, located adjacent to Eagle Rock adjacent to Empire Grade Road, and in proximity to Mill Creek adjacent to the southern portion of the project area. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area in the Felton and Santa Cruz USGS 7.5' Quadrangles.

Monterey pine (*Pinus radiata*)

Description/Status:

Pinus radiata, or Monterey pine is a tree that is native to California with a California rare plant rank of 1B.1. The tree grows less than 125 ft (38 m) tall and develops a mature black bark and irregular, round-topped crown. There are 2 to 3 needles per bundle (Haller & Vivrette, 2012).



Habitat:

This species' range is limited to a few native stands on the California central coast; typically closed-cone-pine forest, oak woodland from 80 to 605 ft (25 to 184 m) elevation.

Proximity/ Potential for Occurrence:

Known to Occur. This species has an occurrence recorded in southwestern portion of project area adjacent to Canyon Road and Last Chance Road.

White-flowered rein orchid (*Piperia candida*)

Description/ Status:

Piperia candida, or white-flowered rein orchid, is a perennial herb that can reach approximately 1.5 ft (0.5 m) in height. The stems are erect and is spike-like near the inflorescence, which has many small, white flowers with green veins. The basal leaves are approximately 18 cm long and 3 cm wide and are reduced in size higher up on the stem. White-flowered rein orchid blooms (March) May to September.



Habitat:

The white-flowered rein orchid grows in coniferous forests within coastal mountain ranges usually in elevations between 148 to 5299 ft (45 to 1615 m).

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, located in Big Basin Redwoods State Park adjacent to East Waddell Creek and Hihn Hammond Road. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Davenport and Mindego Hill USGS 7.5' Quadrangles.

Choris' popcornflower (*Plagiobothrys chorisianus var. chorisianus*)

Description/Status:

The Choris' popcornflower, or *Plagiobothrys chorisianus var. chorisianus*, is a California endemic herb with a California rare plant rank of 1B.2. This species has a decumbent to erect, branching stem with spiny hairs and sheathing leaves. The inflorescence have bracts at the base and are comprised of a white, lobed corolla with yellow coloration from the center. Choris' popcornflower blooms March to June.



Habitat:

This species grows in moist, grassy areas in wetlands or ephemeral drainages. It favors coastal prairie, chaparral, northern coastal scrub, and wetland-riparian communities between 49 to 525 ft (15 to 160 m) elevation.

Proximity/ Potential for Occurrence:

Known to Occur. This species has an occurrence recorded in the northwestern portion of project area along Cloverdale Road adjacent to Old Womans Creek.

San Francisco popcornflower (*Plagiobothrys diffuses)*

Description/Status:

The San Francisco popcorn flower (*Plagiobothrys diffuses)* is an endangered species on the state list and is listed as 1B.1 on the California rare plant ranking. This species is an annual herb which ranges from 1.9 to 9.8 in (4.8 to 25 cm) tall. There are five white petals that form the flower. The inner portion of the flower is yellow. There are strigose across the plant and the leaves grow on the upper stem.


Alex Jones

Habitat:

The San Francisco popcorn flower is found within sparsely vegetated costal prairies, valleys, or foothill grasslands (Rourk, n.d).

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, located adjacent to State Highway 1 along Whitehouse Canyon Road, and south of project area along Purdy Ranch Road. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Año Nuevo, Felton, and Santa Cruz USGS 7.5' Quadrangles.

Scotts Valley polygonum *(Polygonum hickmanii)*

Description/Status:



Scotts Valley polygonum *(Polygonum hickmanii)* is classified as endangered within the state of California, and federally. It has a rating of 1B.1 on the California rare plant ranking. This small annual plant grows in compact patches on the ground. It doesn't grow taller than 2 in (5 cm). Linear lives line the steam and are especially present near the tips of the branches. One flower occurs in the leaf axils. The flowers are only 2-3 mm long and are white or slightly pink in color. Within the flower, there are eight stamens with orange pink anthers at the tip of the stamens (CNPS, n.d).

Habitat:

This species grows within coastal prairie on mudstone and sandstone.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Felton USGS 7.5' Quadrangle.

pine rose (*Rosa pinetorum*)

Description/Status:



Rosa pinetorum or, pine rose is a shrub that is native and endemic (limited) to California with a California rare plant rank of 1B.2. There are prickles along the stem and leaves are glabrous or finely hairy. This species is generally 1 to 5-flowered with pink petals 15 to 20 mm wide. Pine rose flowers from May to June (Ertter, 2014).

Habitat:

This species typically inhabits closed-cone coniferous forest and cismontane woodland from 5 to 3100 ft (1.5 to 945 m) elevation.

Proximity/ Potential for Occurrence:

Known to Occur. This species has an occurrence recorded in the southwestern portion of project area along State Highway 1 adjacent to Theodore J. Hoover Natural Preserve.

chaparral ragwort (*Senecio aphanactis)*

Description/Status:



Senecio aphanactis, or chaparral ragwort is an annual herb that is native to California, and also found in Baja California with a California rare plant rank of 1B.2. This species is an annual that grows from a short, thin taproot. The singular stem is often branched near base and grows 5 to 20 cm tall. The leaves are evenly distributed and about 2 to 4 cm long. The flower heads occur in open clusters and are 5 to 6 mm long. This species typically flowers from January to April (Calflora, n.d.).

Habitat:

This species typically inhabits chaparral, cismontane woodland, and coastal scrub from 50 to 2625 ft (15 to 800 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Davenport and Mindego Hill USGS 7.5' Quadrangles.

Scouler's catchfly (*Silene scouleri ssp. scouleri*)

Description/ Status:



Silene scouleri ssp. Scouleri, or Scouler's catchfly, is a perennial herb listed as a 2B.2 species on the California rare plant ranking. This species has an erect stem that is densely puberulent and oblanceolate to elliptic lower leaves and lanceolate to ovate upper leaves. The flowers are subsessile to pedicelled with hairy, veined calyx that are white to pink in coloration. Scouler's catchfly typically blooms from June to August, however, may bloom as early as March and as late as September.

Habitat:

This species favors rocky slopes and coastal bluffs within northern coastal scrub or valley and foothill grassland communities below 1968 ft (600 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area in the Mindego Hill USGS 7.5' Quadrangle.

San Francisco campion (*Silene verecunda ssp. Verecunda*)

Description/ Status:



Silene verecunda is a perennial herb that is native to California, and found elsewhere in western North America. This perennial herb grows 4 to 22 in (10 to 55 cm) tall with an ascending to erect stem. The flowers are 1 cm long, densely puberulent and greenish to reddish in color. The San Francisco campion blooms from March to June (Calflora, n.d.).

Habitat:

This species typically inhabits rocky outcrops of coastal bluff scrub, chaparral coastal prairie, coastal scrub, valley and foothill grassland from 100 to 2115 ft (100 to 645 m) elevation.

Proximity/ Potential for Occurrence:

Known to occur. This species has an occurrence recorded in the southwestern portion of project area adjacent State Highway 1 and Skyline-To-The-Sea Trail Road.

Santa Cruz microseris (*Stebbinsoseris decipiens*)

Description/ Status:



Stebbinsoseris decipiens, or the Santa Cruz microseris, is an annual herb endemic to California and is listed as a 1B.2 species on the California rare plant ranking. This species has primarily basal leaves that are entire to pinnately lobed with hairs that dry as white scales. The inflorescence is a liguliflorous head with yellow to white ligules. The fruit is spindle-shaped with dark purple tips located at the base of the pappus. Santa Cruz microseris blooms April to May.

Habitat:

This species favors open areas in loose or disturbed soil, usually derived from sandstone, shale, or serpentine, on seaward slopes within northern coastal scrub, broadleafed upland forest, closed-cone pine forest, mixed evergreen forest, chaparral, and coastal prairie communities between 33 to 1640 ft (10 to 500 m) in elevation.

Proximity/ Potential for Occurrence:

Known to Occur. This species has an occurrence recorded in the southwestern portion of project area along the Skyline-To-The-Sea Trail Road adjacent to Pumphouse Bridge Road.

Northern slender-leaved pondweed (*Stuckenia filiformis ssp. Alpina*)



Description/ Status:

Stuckenia filiformis ssp. Alpina, or the slender-leaved pondweed, is a perennial aquatic herb and is listed as a 2B.2 species on the California rare plant ranking. This species has alternate leaves with a prominent midvein, are very narrow and 0.2 to 1 mm wide with tightly clasping stipular sheaths and blunt, notched apexes. Slender-leaved pondweed blooms May to June.

Habitat:

This species can be found in marshes and swamps as well as shallow, clear water of lakes and drainage channels between 984 to 7054 ft (300 to 2150 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, located approximately west of the project area along State Highway 1 within Año Nuevo State Reserve.

Santa Cruz clover (*Trifolium buckwestiorum*)



Description/ Status:

Trifolium buckwestiorum, or Santa Cruz clover is an annual herb that is native and endemic (limited) to California with a 1B.2 California rare plant ranking. This species is annual and glabrous with an ascending stem. The leaves are elliptic to obovate and finely serrated. The inflorescences are head-like, 8 to 12 mm wide and 5 to many-flowered. Santa Cruz clover typically blooms from April to October (Calflora, n.d.).

Habitat:

This species typically inhabits broad-leafed upland forest, cismontane woodland, and coastal prairie from 115 to 2000 ft (35 to 610 m) elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, located approximately south of project area, along Purdy Ranch Road adjacent to Scott Creek, and adjacent to State

Highway 1 and Swanton Road. Known occurrences within 5 miles of project area in the Año Nuevo and Davenport USGS 7.5' Quadrangles.

Pacific Grove clover (*Trifolium polyodon*)

Description/Status:

Pacific Grove clover (*Trifolium polyodon*) is classified as rare in the state of California listing and has a rating of 1B.1 on the California rare plant ranking. Stems range from 1 to 2 cm long, depicted as sprawling branched. The head of the clovers range from 0.5 to 2.5 cm wide with pea-like flowers atop the stems. Its stipules grow up to 1 cm long from the node. Leaflets are 5 to 20 cm long with rounded tips, forming alternate, compounding leaves.



Habitat:

The Pacific Grove clover is commonly found in coastal prairie, wet meadows, closed cone pine forests, and riparian areas.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Big Basin and Felton USGS 7.5' Quadrangles.

Cooper's hawk (*Accipiter cooperii*)


Evan Lipton 2017

Description/Status:

Accipiter cooperii, or the Cooper's hawk is on the CDFW watch list. The Cooper's hawk is a medium-sized hawk, about 14 to 20 in (36 to 51 cm) in length. This species has an upright posture, reddish bars on underparts, and a long tail, with thick dark bands. The bill is fairly small and strongly hooked (Audubon, 2014).

Habitat:

This species is associated with deciduous and mixed forests and open woodland habitats such as riparian woodlands, semiarid woodlands, and other areas where the woodlands occur in patches. Breeding begins in March with females laying 4 to 5 eggs with young remaining in the nest for up to 8 weeks.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area within the Felton and Davenport USGS 7.5' Quadrangles.

northwestern pond turtle (*Actinemys marmorata*)

Description/Status:

The western pond turtle *(Actinemys marmorata*) is a proposed threatened species on the federal list and a CDFW species of special concern. This species ranges from brown to black on the upper shell (carapace), with lighter marbling visible close. The lower shell (plastron) is black and yellow. The head and legs are dark with potential markings. Western pond turtles are range between 6 to 8 in (15 to 20 cm) in length.


Grayson Sandy

Habitat:

The western pond turtle is aquatic with its habitat being streams, ponds, lakes, permanent and ephemeral wetlands. Along with those locations, the turtles require terrestrial habitats for nesting (USFWS Western Pond Turtle, n.d.).

Proximity/ Potential for Occurrence:

Known to occur, this species is known to occur in the project area, which contains suitable habitat. There are also known occurrences within 1 mile of project area, located immediately adjacent to southern portion of project area boundary along State Highway 1 and Canyon Road, and approximately west of project area adjacent to Año Nuevo State Park along Whitehouse Canyon Road. Known occurrences beyond 5 miles within CNDDB search area in the San Gregorio, Santa Cruz, Felton, Castle Rock Ridge, La Honda, Cupertino and Mindego Hill USGS 7.5' Quadrangles.

tricolored blackbird (*Agelaius tricolor*)

Description/Status:

Agelaius tricolor is listed as state threatened and CDFW species of special concern. It is a medium-sized, about 7 to 9 in (18 to 24 cm) total length, sexually dimorphic North American passerine (USFWS Tricolored blackbird, n.d.). Adult males are typically larger than females and are black with bright red and white plumage on the wing shoulder. Adult females have sooty brown-black plumage with distinct grayish streaks, a relatively white chin and throat, and a smaller reddish shoulder-patch.



Habitat:

Tricolored blackbirds are found in areas near water, such as marshes, grasslands, and wetlands (Fernandez, 2011). They require some sort of substrate nearby to build nests. This substrate is often in the form of aquatic vegetation. They also need foraging areas, which can consist of grassland or agricultural pastures such as rice, grain, or alfalfa.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area. Located approximately south of project area adjacent to State Highway 1 and Last Chance Road within Laguna de la Trancas. Known occurrences within 5 miles of project area, and beyond 5 miles

within the CNDDB search area in the Davenport and Santa Cruz USGS 7.5' Quadrangles.

California tiger salamander – central California Distinct Population Segment (DPS) (*Ambystoma californiense*)


Alice Abela

Description/Status:

The California tiger salamander (*Ambystoma californiense*) is threatened on the federal and state in addition to being on the watch list of the CDFW. This salamander exhibits a robust, terrestrial morphology characterized by a broad, rounded snout and a stocky body. Adults attain lengths ranging from 6 to 9.5 in (16 to 24 cm), showcasing a variable dorsal coloration adorned with either white or yellowish spots/bars. Their black eyes protrude from the head. The difference in sex is observed with males generally surpassing females in size (USFWS California Tiger Salamander, n.d.).

Habitat:

The California tiger salamander uses both upland habitat and aquatic areas within their life cycle. To breed, these salamanders use ponds, vernal pools, and other ephemeral or permanent bodies of water. To support salamander larvae development, these water bodies must hold water for 12 weeks. The California tiger salamander inhabits animal burrows or underground hideaways for protection from predators and to scavenge for insects during nonbreeding periods.

Proximity/ Potential for Occurrence:

Unlikely to occur. The project area is unlikely to support this species as it is only found in an area in the far southern portion of Santa Cruz County. Known occurrence beyond 5 miles of project area within CNDDB search area in the Cupertino and Mindego Hill USGS 7.5' Quadrangles.

Santa Cruz black salamander (*Aneides niger*)

Description/ Status:



Aneides niger, or the Santa Cruz black salamander, is endemic to California and is listed as a CDFW species of special concern. Adults measure 2 to 3 3/4 in long (5.1 - 9.5 cm) from snout to vent, and up to 5.5 inches (14 cm) in total length. Adults have uniform shiny, black coloration without spots. Juveniles have small white spots that cover dorsal and ventral surfaces, that occasionally exhibit grey, green, or black coloration beneath the spotting (Santa Cruz Black Salamander - Aneides Niger, 2019).

Habitat:

This species occurs in mixed deciduous woodland, coniferous forests, and coastal grasslands in California. This species can be found in riparian areas near streams and under damp debris, but do not inhabit streams.

Proximity/ Potential for Occurrence:

Known to Occur. This species has occurrences recorded along Waddell Creek and Skyline-To-The-Sea Trail in the southern portion of the project area, along Gazos Creek Road and Gazos Creek, adjacent to Berry Creek in the easter portion of the project area, and adjacent to Cloverdale Road and Old Womans Creek in the northwestern portion of the project area.

pallid bat *(Antrozous pallidus)*

Description/Status:



The pallid bat, or *Antrozouz pallidus,* is a CDFW species of special concern. Adults can reach approximately 2 to 3 in (6 to 8 cm) length including its tail and has a wingspan of approximately 15 in (38 to 40 cm) wide. This species is dorsally cream-yellow to light brown in color and pale to white on its underside with woolly fur. The pallid bat has wart-like glands near the nose that secrete an odor as

a defense mechanism and have a U-shaped ridge above their nostrils. The ears are large and pointed with serrated edges (Animalia, 2024).

Habitat:

This species favors rocky outcrops in semi-arid climates within grasslands, chaparral, oak woodlands, and coniferous forests. The pallid bat diet consists of ground-dwelling prey like small mammals or reptiles and large flying or ground-dwelling insects.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within the CNDDB search area in the Mountain View, Castle Rock Ridge, and La Honda USGS 7.5' Quadrangles.

long-eared owl (*Asio otus*)

Description/Status:

The long-eared owl, or *Asio otus*, is a CDFW species of special concern. Adults are medium-sized birds and can reach up to 13.8 to 15.8 in (35 to 40 cm) in length. This species has long ear tufts with a squarish head and long, narrow facial disks. Long-eared owls have buff or orange faces and intricate black, brown, and buff patterning on their feathers. This species is nocturnal and spends days roosting in tree canopies. They are fairly vocal, making a variety of calls, and hunt at night by swooping in low passes over the ground (All About Birds, 2017).



Habitat:

This species inhabits open woodlands, forest edges, riparian strips along rivers, wooded ravines and gullies. Breeding habitat must include thickly wooded areas for nesting and roosting with nearby open spaces for hunting.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. No known occurrence within 5 miles of project area. Known occurrence beyond 5 miles of project area within CNDDB search area in the Mindego Hill USGS 7.5' Quadrangle.

burrowing owl (*Athene cunicularia*)

Description/Status:

The burrowing owl, or *Athene cunicularia*, is a CDFW species of special concern and has experienced population decline across California due to habitat loss and fragmentation among other factors. This species is a small owl that nests underground instead of in trees. The burrowing owl can reach up to 9.8 inches (25 cm) in length with long legs and short tails. Their heads are rounded and lack ear tufts. Burrowing owls are sandy-colored birds with mottled brown and white spots on their back feathers which are relatively long and rounded (USFWS, n.d.).



Habitat:

This species nests in underground burrows instead of trees like other owl species. They live in wide-open, sparsely vegetated areas like prairies, deserts, grasslands and agricultural fields. They spend most of their time low to the ground, walking, running, flying low or perched on mounds, bushes and fenceposts.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within the CNDDB search area in the Davenport, Santa Cruz, Cupertino, La Honda, and Mindego Hill USGS 7.5' Quadrangles.

western bumble bee (*Bombus occidentalis*)

Status/Description:

Bombus occidentalis, or western bumble bee, is a state candidate endangered species. The females, or worker and queens, have 12 antenna segments and six segments with a yellow thorax and yellow sides on the abdominal segment and a reddish-black fifth segment. Males have similar coloration; except they have 7 abdominal segments and 13 antenna segments. This species has six



segmented legs with thin wings that are approximately the same size as the body.

Habitat:

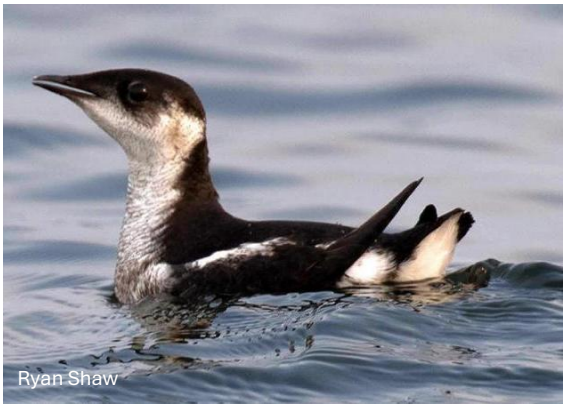
This is a pollinator species that associates with a wide range of flowering plants and crops within open coniferous, deciduous, and mixed-woodland forests, wet and dry meadows. The western bumble bee is capable of foraging in cold, rainy weather conditions and commonly nests underground (Evans et al., n.d).

Proximity/ Potential for Occurrence:

Known to occur. This species has a known occurrence recorded within Big Basin Redwoods State Park adjacent to Hihn Hammond Road.

marbled murrelet (*Brachyramphus marmoratur*)

Description/Status:



Brachyramphus marmoratur, or the marbled murrelet, is a state endangered and federally threatened seabird species. The marbled murrelet is a small seabird species that has an approximate wingspan of 10 in (25 cm) wide. This species appears red brown with mottled, white spots during the breeding season and appear to have dark grey backsides and white undersides with white patches on the face and shoulder areas during the nonbreeding season.

Habitat:

This species favors nesting sites in old-growth coniferous forests or rocky talus slopes near the Pacific Ocean, up to approximately 15 miles (24 km) inland. The marbled murrelet nests on large branches approximately 4 in diameter or larger that create a platform that may be screened from predators or wind by branches of nearby trees, where the female will lay one yellow, olive, or blue-green egg with brown, black, and lavender specks. This seabird forages in coastal marine habitats, dieting on primarily fish and crustaceans (All About Birds Marbled Murrelet, n.d.).

Proximity/ Potential for Occurrence:

Known to Occur. This species has occurrences recorded near various drainages throughout the project area, including Gazos Creek, Whitehouse Creek, Berry Creek, Cascade Creek, and West Waddell Creek.

western snowy plover (*Charadrius nivosus nivosus)*

Description/Status:



The western snowy *(Charadrius nivosus nivosus)* plover is listed as threatened federally and is a CDFW species of special concern. This species is a small shore bird that has a short neck and horizontal posture. Breeding adults have a black crown stripe, a dark ear patch, and black patch on the side of their neck. Pale sandy gray above and white below. Bill is black in all seasons. Nonbreeding/immature individuals lack the dark crown stripe and have a paler neck stripe (Audubon, n.d.).

Habitat:

During the breeding season, the western snowy plover can be seen nesting along seashores, peninsulas, offshore islands, bays, estuaries, and rivers.

Proximity/ Potential for Occurrence:

Known to Occur. This species has an occurrence recorded in the southwestern portion of the project area adjacent to State Highway 1 and Waddell Creek. However, the species is only likely to be found on the coastal side of Highway 1.

Ohlone tiger beetle (*Cicindela Ohlone)*

Description/Status:



The Ohlone tiger beetle (*Cicindela ohlone)* is federally listed as endangered. The Ohlone tiger beetle is a relatively small beetle for its genus ranging from 0.37 in to 0.49 in (9.5 mm to 12.5 mm) and has large eyes and long slender legs. The adult specimens are grassy green with mild bronze accents on their thorax. The forewings are bright green and their legs are coppery- green. Larve are grub-like and mimic other tiger beetle larvae, typically yellowish to white in color (USFWS Ohlone Tiger Beetle, n.d.).

Habitat:

The Ohlone tiger beetles are only found in grassland habitats throughout coastal terrace prairie. These plant communities are characterized by purple needlegrass and California oatgrass. These coastal prairies are also characterized by shallow soils that become hard in the dry season and soften during the wet season. Adult beetles' bury larva in unvegetated areas on the edges or near grasslands for thermoregulation.

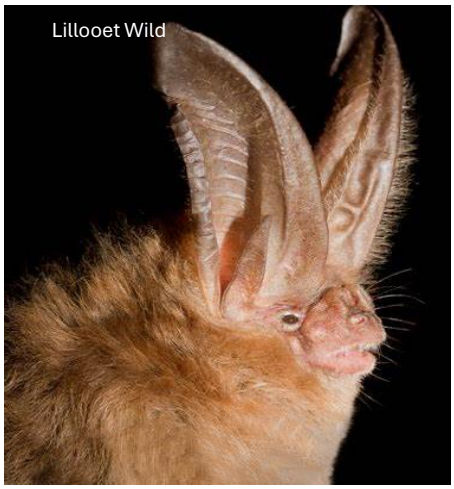
Proximity/ Potential for Occurrence:

Unlikely to occur, this species is limited to Watsonville loam, which is not found in the project area. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Laurel, Felton, and Santa Cruz USGS 7.5' Quadrangles.

Townsend's big eared bat (*Corynorhinus townsendii*)

Description/Status:

Townsend's big eared bat, or *Corynorhinus townsendii,* is a CDFW species of special concern. This medium-sized bat can reach approximately up to 5 in (11.5 cm) long and has large ears that can reach approximately 2 in (3.8 cm) in length and are curved when relaxed. The dorsal side of this species is brown or pale grey and the underside is generally buff or tan colored. Townsend's big eared bat has two large glands beside the elongated nostrils and there are generally no visible differences between sexes.



Habitat:

This species favors dense coniferous forests, native prairies, and coastal communities usually below 10,800 feet (3292 m) in elevation. This bat prefers dark, open caves or cliffs in cold areas for roosting and does not roost in rock crevices. The primary food source for this species is moths, however, beetles and other small insects are also common.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, located approximately south of project area along Empire Grade adjacent to Mill Creek. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within the CNDDB search area in the Franklin Point, La Honda, and Davenport USGS 7.5' Quadrangles.

yellow rail *(Coturnicops noveboracensis)*

Description/Status:



The yellow rail, or *Coturnicops noveboracensis,* is a CDFW species of special concern. This species is a secretive, wetland bird that is most often detected by ticking noises it makes at night. The yellow rail is small, averaging only 6 to 7 in (15 to 18 cm) in length. It has a short bill, buffy yellow underparts, and a darker buffy striped back which are the primary identifying features that distinguish this species from other rails (Minnesota Department of Natural Resources, n.d.).

Habitat:

Yellow rails breed in sedge-or grass-dominated wetlands, specifically wet prairies with narrow-leaves sedges and wet meadows with optimal water depths from 1 to 10 in (2 to 25 cm) deep.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence beyond 5 miles of the project area within the CNDDB search area in the Felton USGS 7.5' Quadrangle.

Black swift (Cypseloides niger)

Description/Status:

Cypseloides niger is listed by CDFW as a species of special concern. They have a large swift with long, curved, and pointed wings. The tail is slightly notched, but often appears square. It has a tiny, almost invisible bill and very small feet. They are entirely blackish with whitish spots on the side of the forehead that are difficult to see on flying birds. Juveniles are blackish with white edging on the body and flight feathers.



Habitat:

Cypseloides niger nests on cliff ledges and behind waterfalls in areas inaccessible to predators. Forages over forests and open areas.

Proximity/ Potential for Occurrence:

Known to Occur. This species has an occurrence recorded along Berry Creek adjacent to West Waddell Creek State Wilderness.

monarch – California overwintering population *(Danaus plexippus plexippus pop. 1)*

Description/Status:

The monarch butterfly (*Danaus Plexippus)* is a candidate for a federal listing. Monarch butterflies are large and orange with dark veins surrounded by two rows of white spots and the edge of the wing. The wingspan ranges from 3.5 to 4 in (8.9 to 10.5 cm. The body is dark. Males are larger than females and have a dark spot over a vein on their hind wings (WWF, n.d.).



Habitat:

As caterpillars, monarchs are heavily reliable on milkweed as it obligates larval host plant. Milkweed provides toxins to protect them from predation. As adults, monarchs feed on nectar from a variety of flowers. Monarchs overwinter in tree species that include gum, pine, cypress, and sycamore.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area along State Highway 1 and Green Oaks Creek. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within the CNDDB search area, in the Davenport, Pigeon Point, and Franklin Point USGS 7.5' Quadrangles.

California giant salamander (*Dicamptodon ensatus*)

Description/ Status:

Dicamptodon ensuatus, or the California giant salamander, is a CDFW species of special concern. Adults are stout with a long tail reaching up to about 12 in (30 cm) in total length. The bodies are light brown to brassy and have distinct dark patches. The front two feet have four toes and the hind feet have five toes.



Habitat:

The California giant salamander requires habitat with cover for hiding, sun protection, and breeding and can be found under rocks, logs, or stones. This species' aquatic habitat consists of lakes, ponds, rivers, streams, or fast-moving water. Females deposit 85-200 eggs underwater and protect the eggs until they hatch. This species has a relatively slow reproduction rate due to long gestation period and they do not reach sexual maturity until they are 5-6 years old.

Proximity/ Potential for Occurrence:

Known to Occur. This species has occurrences recorded along Skyline-To-The-Sea Trail and Waddell Creek, and along Gazos Creek Road and Gazos Creek.

white-tailed kite (*Elanus leucurus*)

Description/ Status:


Matt Davis

Elanus leucurus, or the white-tailed kite, is a CDFW fully protected species. This raptor is small to medium sized, growing up to 12.6 to 15 in (32 to 38 cm) in length, with a larger head and more narrow body. This species is largely pale identified by its entirely white tail, black shoulder patches, white head, and red eyes.

Habitat:

This species inhabits grasslands, marshes, orchards, river valleys, and woodlands. They typically nest in woodlands near hunting ground for small mammals and rodents.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences beyond 5 miles of project area within the CNDDB search area, in the Felton and Cupertino USGS 7.5' Quadrangles.

tidewater goby (*Eucyclogobius newberryi*)

Description/Status:


Brenton Spies

The tidewater goby (*Eucyclogobius newberryi*) is a federally endangered fish species. They are elongated in shape, and are semi-translucent gray, brown or olive with black mottling. Females often appear darker than males, developing black or dark coloring on the body on fins during breeding. Tidewater goby has two large distinct pectoral fins and fused pelvic fins that are disc shaped below the chest and belly. These fish range from 0.6-2 in (1.5- 5 cm) in length (USFWS Tidewater Goby, n.d.).

Habitat:

Tidewater gobies reside in lagoons, estuaries, marshes, and freshwater tributaries. Within these aquatic environments, water is shallow but not stagnant. Although these waters are commonly brackish, gobies are mobile navigating upstream into freshwater or downstream into waters with higher salinity (up to 28 parts per thousand). Tidewater gobies are commonly found in water that is less than 12 parts per thousand.

Proximity/ Potential for Occurrence:

This species is known to occur in the Waddell Creek Lagoon. Known occurrence within 1 mile of project area immediately adjacent to project area boundary, along Waddell Creek and Pumphouse Bridge Road. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within the CNDDB search area in the Davenport, Pigeon Point, San Gregorio, Año Nuevo, Santa Cruz, and Santa Cruz OE W USGS 7.5' Quadrangles.

Smith's blue butterfly (*Euphilotes enoptes smithi*)

Description/Status:



The Smiths blue butterfly (*Euphilotes enoptes smithi*) is a federally endangered species (NWF, n.d.). This small butterfly has a wingspan that is less than 1 in (2.54 cm). Males are vivid blue in color with black edges along their wings. Females are brown on top of the wing with a thin white fringe and an orange bar across their hind wing. The bottom side of the wing on both sexes are black with orange spots.

Habitat:

Smith's blue butterfly is found in scattered populations in coastal dune, coastal scrub, chaparral, and grassland habitats. These habitats are associated with two plants that their entire lives are focused around, coast buckwheat and the Seacliff buckwheat. Adults consume the nectar of these plants then lay their eggs on the flowers. Historically, their ranges are from Monterey Bay south through Big Sur to the Point Gorda area.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence beyond 5 miles of project area within the CNDDB search area in the Felton USGS 7.5' Quadrangle.

saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*)

Description/Status:

Geothlypis trichas sinuosa, or the saltmarsh common yellowthroat, is a CDFW species of special concern and is endemic to California. Adult males are brown to tan with a yellow throat and underside with a black mask around its eyes, whereas females are primarily brown, grey or tan without a mask or changes in coloration. This species is small, reaching approximately 5 in (13 cm) in length.



Habitat:

This species prefers herbaceous wetland and salt marsh communities usually below 1500 feet in elevation. Small, cup-shaped nests are usually well-hidden by tall vegetation less than approximately 1 meter above ground. Females will lay 3-6 white eggs with dark spots on one end of the egg. This species primarily consumes insects like spiders and caterpillars.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area, and beyond 5 miles of project area within the CNDDB search area in the San Gregorio, Half Moon Bay, and Davenport USGS 7.5' Quadrangle.

California black rail (*Laterallus jamaicensis coturniculus)*



Description/ Status:

Laterallus jamaicensis coturniculus, or the California black rail is listed as threatened on the state list. The size of the black rail is small measuring at 5 to 6 in (12-15 cm) long with a wingspan of about 11 in (28 cm). The coloring of this species is black and gray with flecks of white across its wings and side. Their nape is chestnut-to brown (Spautz et al., 2005).

Habitat:

The habitat of the California black rail consists of salt and fresh water tidal marshes, coastal prairies, and impounded wetlands. It is common to see these areas with a dense cover of pickleweed, bulrushes, cattails, and salt grass. The California black rail utilizes the areas below the vegetation for foraging and movement. It is to note that the water is quite shallow throughout these areas about 1.2 in (3 cm) deep.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, immediately adjacent to southwestern portion of project area boundary along Highway 1 and Canyon Road. Known occurrence beyond 5 miles of project area within CNDDB search area in Santa Cruz USGS 7.5' Quadrangle.

San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)

Description/Status:



The San Francisco dusky-footed woodrat, *or Neotoma fuscipes annectens*, is a CDFW species of special concern. This rodent species can reach approximately 9 in (23 cm) in length and the tail adds approximately 6.5 to 8 in (17 to 20 cm) to its length. The underside of this woodrat is white or grey and the dorsal side is primarily brown or grey in coloration. The San Francisco dusky-footed woodrat has large round ears and light colored, slightly hairy feet.

Habitat:

This species prefers moderate canopy coverage in oak woodland, chaparral or shrubland, and coniferous forest communities. The San Francisco dusky-footed woodrat builds complex nests from sticks and debris that can reach up to approximately 8 feet (2.5 m) wide and 6 feet (2 m) tall. Nests are typically occupied by a single adult, except for a short period of time after the female gives birth to her pups. The diet for this species consists of woody plant species such as maple, coffeeberry, alder, live oak, and elderberry.

Proximity/ Potential for Occurrence:

Known to Occur. This species does not have recorded occurrences within the project area but is confirmed to occur through local expertise.

Coho salmon- central California coast (*Oncorhynchus kisutch pop. 4*)

Description/Status:


Mike Dean, CDFW

Oncorhynchus kisutch pop. 4, or the central California coast Coho salmon (CCC Coho salmon), is a federally and state endangered species. Coho Salmon are a medium to large salmon, with spawning adults typically measuring 22 to 28 in (55 to 70 cm) fork length and weighing from 7 to 13 lbs (3 to 6 kg). Spawning males are characteristically dark red on the sides, with the head and back dark green and the belly gray to black. Females are less colorful than males and often appear dull in comparison, with dark pink on the sides. Most spawning males are characterized by a hooked jaw and slightly humped backs. The jaw is less hooked in jacks (2-year olds) and only very slightly hooked in females. Both sexes have small black spots on the dorsal (back) fin and upper lobe of the caudal (tail) fin, with no spots on the lower lobe of the caudal fin. The gums of the lower jaw are usually gray, except for the upper area at the base of the teeth, which is white (Olswang, n.d.).

Habitat:

CCC Coho salmon spend approximately the first half of their life cycle rearing and feeding in streams and small freshwater tributaries. Spawning habitat is comprised of small streams with stable gravel substrates. These fish need cold, clean freshwater streams to lay their eggs, along with side channels and floodplains where young fish can find food and hide from predators. The remainder of their life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean (NOAA Fisheries, 2024).

Timing of streamflows is critically important to CCC Coho salmon. Severe high flow events that occur early in winter (December, January) can scour holding pools, move large wood cover, open lagoon mouths for migration, and generally improve Coho habitat, while similar flood events later in the season (February, March) can wash away redds and eggs or flush juvenile CCC Coho out of over-wintering habitat such as pools, side channels, or estuaries (California Trout, n.d.).

Proximity/ Potential for Occurrence:

Known to Occur. This species has an occurrence recorded along Waddell Creek and Skyline-To-The-Sea Trail.

steelhead – central California coast (*Onchorhynchus mykiss irideus pop.8*)

Description/Status:

Onchorhynchs mykiss irideus pop.8, or the central California coast steelhead, is a federally threatened species along the central coast of California. This anadromous trout species can range from approximately 14 to 26 in (35 to 65 cm) in length and can weigh up to approximately 12 pounds (5 kg). Adults appear primarily silver in coloration with pink cheeks and green backs and often have black spots along the tail and fins. Juveniles resemble adults in color; however, they have an additional dark oval marks located along the lateral line and between the head and dorsal fin.



Habitat:

This is an anadromous fish species that occurs in freshwater Pacific coast streams. This steelhead species will migrate to marine waters once it nears maturity, then returns to freshwater streams for spawning. Typically, this species requires a minimal of approximately 7 inches of water depth for migration and favors spawning habitat between 6 and 24 inches deep, usually in slow moving currents. High water velocities and low water depth can impede this species' capability to migrate.

Proximity/ Potential for Occurrence:

Known to Occur. This species has occurrences recorded along Waddell Creek and Skyline-To-The-Sea Trail, and along Gazos Creek.

osprey (*Pandion haliaetus*)

Description/Status:



Pandion haliaetus, or the osprey, is on the CDFW species watch list. This species is a very large, distinctively shaped hawk growing up to 23 in (58 cm) in length. Their bodies are slender, with long, narrow wings and long legs. Ospreys are typically colored brown above and white below. Ospreys search and hunt for fish by circling above water and can be seen hovering before diving feet first to catch a fish (All About Birds, n.d.).

Habitat:

This species inhabits coasts and shorelines, freshwater and saltwater wetlands, lakes, and ponds. This species typically nests in the open on poles, channel markers, dead trees, and often over water.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences beyond 5 miles of project area within CNDDB search area, in the Felton and Castle Rock Ridge USGS 7.5' Quadrangles.

Mount Hermon June beetle *(Polyphylla barbata)*

Description/Status:



Polyphylla barbata or, the Mount Hermon June beetle, is a federally endangered species. This species ranges from 0.79 to 0.87 in (20 to 22 mm) in length, with females typically smaller than males. This small dark-brown scarab beetle has light, irregular and broken stripes on the elytra. This beetle is distinguishable from other genus members through the presence of scattered erect hairs on the elytra.

Habitat:

This species is only known for inhabiting the Zayante sandhills of Santa Cruz County.

Proximity/ Potential for Occurrence:

Unlikely to occur. The project area may contain potentially suitable habitat for this species. Known occurrence beyond 5 miles of project area within CNDDB search area, in the Felton USGS 7.5' Quadrangle.

mountain lion (*Puma concolor*)

Description/Status:



Puma concolor, or the mountain lion, is a CDFW Candidate Endangered species. The mountain lion is a large, apex predator growing up to an average 136 pounds (62 kilograms). This species is usually brownish is coloring with varying facial coloring patterns. Mountain lions are active at dusk, night, and dawn, primarily hunting large ungulates. This species is usually solitary and silent, except during breeding associations when they emit long screams. Breeding occurs throughout the year with peak births in summer (Beier, 2024).

Habitat:

This species prefers dense vegetative areas within mountain ranges of coniferous forests, scrub and oak woodlands, and arid communities.

Proximity/ Potential for Occurrence:

Known to Occur. This species does not have recorded occurrences within the project area or within the CNDDB search area but is confirmed to occur through local expertise.

foothill yellow-legged frog *(Rana boylii)*

Description/Status:



Rana boylii, commonly known as the foothill yellow-legged frog, belongs to the genus Rana within the family Ranidae. It is recognized as a federally threatened and state endangered species. The foothill yellow-legged frog is a small-sized 1.46 to 3.23 in (3.72 to 8.2 cm) that ranges from gray, brown, olive, or reddish in coloration. This species often has dark molting or spots and yellow undersides on its hind legs (USFWS Foothill Yellow-legged Frog, n.d.).

Habitat:

There is a wide variety of vegetation types where the foothill yellow-legged frog could find habitat ranging from valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, mixed chaparral, and wet meadows. This frog is frequently associated with streams and is hardly seen far from the edge. Habitat characteristics where breeding may occur includes shallow, rocky, and partially exposed to sunlight.

Proximity/ Potential for Occurrence:

Unlikely to occur. This species was recorded along Waddell Creek adjacent to Skyline-To-The-Sea Trail and Alder Trail camp many years but has not been seen in many years.

California red-legged frog (*Rana draytonii*)

Description/Status:



Rana draytonii, or the California red-legged frog, is a federally threatened species and CDFW species of special concern. This species ranges from 1.75 to 5.25 in (4.45 to 13.4 cm) long with reddish-brown or brown, gray, or olive coloration. The skin is smooth with small black spots on the back and dark bands on the legs. The hind legs and belly are red on the underside and the chest region is creamy and marbled gray.

Habitat:

Common habitat consists of locations near ponds or along streams in humid forests, grasslands, and coastal scrub communities that contain plant cover. This species breeds in permanent water sources and requires moist refuges, like animal burrows, for cover in the dry season.

Proximity/ Potential for Occurrence:

Known to Occur. Occurrences of this species are recorded in the Theodore J. Hoover Natural Preserve, along Gazos Creek in the northeastern portion of the project area, and along Cloverdale Road in the northwestern portion of the project area.

bank swallow (*Riparia riparia)*

Description/Status:



Riparia riparia, or the bank swallow, is listed as threatened on the state list. This species is considered a "small swallow" at 4.7 in (12 cm) in length and a wingspan of up to 4.5 in (11 cm). Adults have a grayish brown mantle, rum and wing coverts contrasting with a distinct brown breast-band and grayish brown crown. Juveniles, which hatch yearly, are different from adults by buff edged or whitish upperparts, and buffy pink throat. Sexes are recognizable by the presence or absence of brood patch or cloacal protuberance (Barrett and Turner, 2020).

Habitat:

The bank swallow commonly breeds along ocean coasts, rivers, streams, lakes, reservoirs, and wetlands within vertical banks, cliffs, and bluffs in alluvial, friable soils. Historically, species were isolated to naturally made sites through mass wasting and weathering. As humans began to move earth and soil, bank swallows now use sites ranging from road cuts to sand and gravel quarries. Bank swallows avoid dense forests, woodlands, deserts, montane areas, and alpine areas due to the scarcity of suitable nesting habitat. In California, populations are observed to be about 6890 ft (2100 m) in elevation.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrences within 5 miles of project area, and beyond 5 miles within the CNDDB search area, in the Año Nuevo, San Gregorio, and Santa Cruz USGS 7.5' Quadrangles.

Myrtle's silverspot butterfly (*Speyeria zerene myrtleae)*

Description/Status:



The myrtle's silver spot butterfly *(Speyeria zerene myrtleae)* is listed as federally endangered. This medium sized butterfly is brown with a wingspan of 2.1 to 2.3 in (5 to 6 cm) (USFWS Myrtle's Silverspot Butterfly, n.d.). The upper surfaces of both the fore and hind wings display a golden brown to reddish-brown hue adorned with numerous prominent black spots, lines, and other markings, occasionally tinged with a hint of green at the base. On the flip side, the undersides exhibit shades ranging from light tan to reddish-brown and brown, featuring black lines along with distinctive silver and black spots. The wings' base and the body boast a dense covering of hairs.

Habitat:

These butterflies are found around coastal dunes, coastal prairies and coastal scrub that are protected from the wind and specifically have, *Viola adunca,* the caterpillars host plant. *Viola adunca* is commonly found along damp banks for on the edge of forest meadows. Ideal habitats for the Myrtle silver spot butterfly are buffered from onshore winds.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area in the San Gregorio USGS 7.5' Quadrangle.

longfin smelt *(Spirinchus thaleichthys)*

Description/Status:



Spirinchus thaleichthys, or the longfin smelt, is a California threatened species and federal candidate species endemic to California and Alaska. This anadromous fish can reach between 4.7 to 5.9 in (12 to 15 cm) in length and has long pectoral fins that reach the pelvic fins. The longfin smelt have olive to pink iridescent backs with silvery sides. To distinguish between sexes, mature males are usually darker than females. Spawning

occurs in freshwater over sandy or gravel substrates, where females can lay between 5,000 and 24,000 adhesive eggs.

Habitat:

This species is euryhaline, meaning it can tolerate a wide range of salinities, and favors nearshore waters, estuaries, and lower freshwater streams. The longfin smelt forages on small shrimp-like crustaceans, such as opossum shrimp (UCANR, n.d.).

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 5 miles of project area in the San Gregorio USGS 7.5' Quadrangle.

red-bellied newt *(Taricha rivularis)*

Description/Status:



Taricha rivularis, or the red-bellied newt, is a CDFW species of special concern. The red-bellied newt is a stocky, medium-sized salamander with grainy skin, no costal grooves, and dark eyes. This species has brownish black coloring above with a deep reddish-orange coloring on its underside. Adults grow up to 2.75 to 3.5 in long (7 to 8.9 cm) from snout to vent, and 5.5 to 7.5 inches (14 to 19.5 cm) in total length (California Herps, n.d.).

Habitat:

This species is found in coastal woodlands and redwood forest along the coast of northern California. Larvae retreat into vegetation and under stones during the day.

Proximity/ Potential for Occurrence:

Unlikely to occur. This species is primarily found north of SF Bay, but a small disjunct population has been found in a nearby quad within Stevens Creek in Santa Clara County. No species have been documented in Waddell Creek. Known occurrences beyond 5 miles within CNDDB search area in the Mindego Hill USGS 7.5' Quadrangle.

American badger (*Taxidea taxus*)

Description/ Status:

Taxidea taxus, or the American badger, is a CDFW species of special concern. The American badger has thick brown or black fur with white stripes on its cheeks and an upturned nose. They have short and stout legs with a flat body that reaches approximately 1.5 to 2 ft (0.5 to 1 m) in length, are muscular, and have long claws. The adult females will prepare a large burrow up to 10 ft (3 m) below the surface for her offspring.



Habitat:

Habitat consists of open areas such as prairies, farmland, and plains as well as edges of woods. The American badger is a nocturnal carnivore and its diet primarily consists of small rodents, reptiles, birds, and insects.

Proximity/ Potential for Occurrence:

May occur. The project area may contain potentially suitable habitat for this species. Known occurrence within 1 mile of project area, adjacent to Olmo Fire Road in Butano State Park. Known occurrences within 5 miles of project area, and beyond 5 miles of project area within CNDDB search area, in the Felton, Santa Cruz, La Honda, Mindego Hill, Franklin Point, Pigeon Point and San Gregorio USGS 7.5' Quadrangles.

San Francisco gartersnake (*Thamnophis sirtalis tetrataenia)*

Description/Status:

The San Francisco gartersnake, or *Thamniphis sirtalis tetrataenia*, is a state and federally endangered species, fully protected by CDFW, and endemic to the San Francisco Bay area of California. Adults can reach 18 to 55 in (46 to 140 cm) length and have large eyes on the sides of their narrow head. This species has many dorsal stripes that are blue-green or greenish yellow to



white, black, and red with a blue-green underside and red head (USFWS San Francisco Garter Snake, n.d.).

Habitat:

This species favors openings in grasslands or wetland areas near ponds, marshes, or sloughs and is capable of swimming. During the dry season, the San Francisco gartersnake may become dormant in rodent burrows. The primary diet consists of amphibians, small mammals, reptiles, earthworms, slugs, slugs, and leeches.

Proximity/ Potential for Occurrence:

Known to occur. There have been several documented occurrences of this species from wildlife surveys in the Theodore J. Hoover Preserve. Known occurrences beyond 5 miles of project area within CNDDB search area in the Franklin Point, Año Nuevo, Pigeon Point, La Honda, Mindego Hill, and San Gregorio USGS 7.5' Quadrangles.

Zayante band-winged grasshopper (*Trimerotropis infantilis)*

Description/Status:

The Zayante band-winged grasshopper, *Trimerotropis infantilis*, is listed as endangered federally. This species is small grasshopper is pale grey to light brown with dark cross bands on the forewings and pale yellow hindwings. The size of the species ranges from 0.54 to 0.85 in (13.7 to 21.6 mm) in length with females generally being larger than males.


Alice Abela

Habitat:

This species is only known for inhabiting the Zayante sandhills of Santa Cruz County. They are commonly found directly on the sandy soil, or on the foliage of the silver bush lupine (*Lupinus albifrons*), which makes up 60% of their diet. Females lay eggs onto the sandy loose soil.

Proximity/ Potential for Occurrence:

Unlikely to occur. The project area may contain potentially suitable habitat for this species. Known occurrences beyond 5 miles of project area within CNDDB search area, in the Felton and Los Gatos USGS 7.5' Quadrangles.

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Attachment E: Coastal Vegetation Treatment Standards

Purpose: The purpose of this attachment is to address the coastal vegetation treatment standards that are required per the Public Works Plans (PWPs) in Santa Cruz and San Mateo Counties.

The Santa Cruz County PWP has an additional project standard that is not included in the San Mateo County PWP. That standard is listed below:

> *Project Standard 4: Santa Cruz County Habitat and Cultural Resource Protection*
>
> *Projects covered under this PWP shall be structured to ensure protection of all LCP identified habitats and cultural resources consistent with the standards of Santa Cruz County LCP Chapters 16.30 and 16.32, including all habitats and their related requirements as listed in LCP Appendix B. In addition, the distance for required cessation of development activities pursuant to subsection (A)(1) of Section 16.40.040 of the County's IP shall control when Mitigation Measure CUL-2 is implemented.*

The information provided and associated protection measures detailed in Section 4.5 Biological Resources Impact BIO-1 through Impact BIO-7 address the requirements of Santa Cruz County Chapter 16.32.

The implementation of Standard Project Requirement (SPR) BIO-4, SPR GEO-6, SPR HYD-4, and Mitigation Measure BIO-4 meet or exceed the requirements of Santa Cruz County Chapter 16.30.

As detailed in the MMRP, the distance for required cessation of development activities pursuant to subsection (A)(1) of Section 16.40.040 of the County's IP will be integrated into Mitigation Measure CUL-2 and be consistent with the requirements.

All other PWP requirements are consistent between Santa Cruz and San Mateo Counties are described in the below Coastal Vegetation Treatment Standards responses.

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 Coastal Santa Cruz Mountains, State Parks Forest Health Initiative will comply with the applicable requirements of the CalVTP PEIR. The Project Specific Analysis (PSA) and Addendum prepared for the project provides details regarding the CalVTP treatment types and activities that would be implemented. As detailed in the PSA Checklist, the project will comply with and carry out all applicable SPRs and Mitigation Measures 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.

> **Response:** The PSA for this project was submitted to the CCC for review on May 2, 2025. Prior to submitting the full PSA, a draft project description, project specifications, and treatment maps were provided to CCC staff for review on January 31, 2025. Comments

were received back from CCC staff on March 11, 2025, and CCC staff met with CA State Parks staff and other project partners to discuss the comments on April 24, 2025. A full draft PSA was submitted to CCC staff for review on May 2, 2025, and CCC staff met with CA State Parks staff and other project partners to discuss the comments on June 4, 2025.

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 public works plan. 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- Vegetated ecosystems of the Santa Cruz Mountains, and the host of valuable services they provide, such as biodiversity, important wildlife habitat, old growth redwoods, and other natural resources, are currently at risk of loss due to a changing climate and the legacy of past land management in the region (EcoAdapt 2021).

Before the widespread policy of fire suppression in the Western United States in the early 1900s estimates suggest that redwood ecosystems in the Santa Cruz Mountains burned approximately every 15-60 years (Stephens and Fry, 2005; Russell and Jones, 2015). Furthermore, because coastal redwood systems were not typically the focus of indigenous burning practices, it is expected that fire occurred even more frequently in coastal oak woodland, grasslands, and coastal prairies.

Prior to the CZU Fire, much of the areas in BSP, ANSP, and the coastal portion of BBRSP had not experienced fire or any analogous disturbance in over a century. As a result, many of the forested ecosystems were overstocked with small and medium-sized trees that were able to germinate and persist under low-light conditions. The resulting forest structure was vulnerable to a stand-replacing wildfire due to elevated surface and ladder fuels from the smaller trees, and also less resilient to drought and other disturbances due to the large number of trees per acre competing for available nutrients, sunlight, and water. Furthermore, in valuable habitat types, such as hardwood forests, shrub-dominated areas, and grasslands, the lack of frequent fire resulted in extensive conifer encroachment into these systems, where conifer trees, predominantly Douglas-fir, are able to overtop, shade out, and ultimately convert these systems into a more homogenous forest structure (Cocking, Varner, and Sheriff, 2012).

In 2020, the CZU Fire burned through 86,509 acres in the Santa Cruz Mountains, exhibiting extreme fire behavior and burning significant amount of vegetation within the Coastal Zone of both Santa Cruz and San Mateo counties. The high intensity fire in many shrub and forest stands resulted in significant mortality of the dominant vegetation, resulting in immediate habitat losses. Due to the release of dormant seedbanks and post-fire successional processes, many of these ecosystems are recovering and exhibiting different plant

community compositions than were present pre-fire and may take decades to achieve comparable ecosystem services.

Furthermore, areas that experienced high severity fire throughout the park contain high densities of hardwood and Douglas-fir snags, including an intertwined thicket of resprouting *Ceaonthus spp.* in the understory (Kranich and Auten, 2024). As the understory *Ceanothus* begins to senesce, and dead trees decay and fall, the resulting forest structure will have an increased continuity of significant fuel loading consisting of shrubs and dead woody material. The resulting conditions coupled with the increased potential for hotter and drier climatic conditions increase the likelihood of high severity fire that may accelerate vegetation changes (Coppoletta et al., 2016, Lydersen et al., 2019). Additionally, invasive plant species pose a continual threat capable of displacing native vegetation and reducing overall biodiversity and quality of habitat in these ecosystems especially where exposed to considerable increases in sunlight.

The resulting ecosystem conditions require environmentally sensitive landscape-level treatments to restore ecological conditions, maintain, and protect environmentally sensitive habitat areas within the coastal Santa Cruz Mountains.

Goal Statement- The goal of the Coastal Santa Cruz Mountains: State Parks Forest Health Initiative is to ecologically restore forest and shrubland conditions to exhibit an increase in healthy growth of mature vegetation while allowing for natural regeneration of understory plant species.

Specific Goals within the project area include:

- Protecting sensitive natural communities and promoting the health of woodland, native grassland, and shrubland ecosystems by reducing conifer encroachment. To increase the health and vigor of residual stands and promote an increase in understory biodiversity.
- In forested ecosystems, establish an open, healthy, and diverse understory by creating forest gaps, removing dead, dying, diseased, and overly dense vegetation, and thinning of small diameter or codominant trees. This will result in a more open understory containing a mosaic of understory species, will retain important habitat features such as snags, large woody debris, and large overstory trees, while also creating appropriate spacing between shrubs and residual trees to increase wildfire resilience.
- Chaparral stands that experienced high severity wildfire will be allowed to reestablish naturally and within their appropriate fire return interval.
- Reintroduce prescribed fire at appropriate intervals to maintain vegetation types, recycle nutrients, reduce fuels, increase resilience, create complexity, and promote a mosaic of diverse plant communities and wildlife habitat.

These goals will be accomplished by implementing prescribed fire or fire surrogates, such as mechanical mastication, manual tree and vegetation removal, pile burning, and

broadcast burning to appropriately address the needs of each vegetative community within the project area.

This project supports the goals of the San Mateo and Santa Cruz Resource Conservation Districts Forest Health and Fire Resilience Program PWPs by seeking to:

- Proactively restore forest health, improve ecosystem resiliency, and conserve working forests by conducting ecologically minded forest health treatments.
- Encourage the long-term storage of carbon of forest and woodland trees and soils through the reduction of dense understory, thus promoting larger healthier stands of mature trees.
- Promote a mosaic of native vegetation types that support diverse native floral, faunal, and fungal assemblages and are resilient to climate change.
- Improve habitat for rare, threatened, and endangered plant and animal species where they are present.
- Increase the ability to manage wildfire and implement prescribed fire.

This project also supports the goals of the California Coastal Commission (CCC) by:

- Promoting public safety, health, and welfare, and protecting public and private property, wildlife, and the natural environment, by protecting the ecological balance of the coastal zone and preventing its deterioration and destruction (California Coastal Act 30001 I).
- Protecting, maintaining, and, where feasible, enhancing and restoring the overall quality of the coastal zone environment and its natural and artificial resources (California Coastal Act 30001.5 (a)).
- Ensuring orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state (California Coastal Act, 30001.5 (b)).

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 Coastal Santa Cruz Mountains, State Parks Forest Health Initiative falls under the CalVTP PSA designation to conduct ecological restoration treatments; in terms of the San Mateo County Forest Health and Wildfire Resilience PWP and the Santa Cruz County Forest Health and Wildfire Resilience PWP, the project falls under the Forest Health distinction.

The vegetative communities within the project area consist primarily of the coast redwood alliance, Douglas-fir – tanoak alliance, oak woodlands, with minor components of madrone, California bay laurel, bigleaf maple, California buckeye, bishop and Monterey pine, coastal scrub, mixed chaparral, grassland, and several other plant communities. The treatments represent a suite of ecologically sensitive management techniques designed to facilitate the management of the project area's various natural resources for the duration of this permitting document. Treatments will focus on:

- Increasing the health and vigor of forested systems by thinning dead, dying, diseased, and overly dense vegetation, and trees that are increasing competition amongst retention trees or increasing ladder fuel loads.
- Use of prescribed fire, both broadcast and pile burning, to reintroduce fire to plant communities at an ecologically-appropriate interval, to reduce dead and dying fuel loads in the footprint of the 2020 CZU Lightning Complex Fire, and as a means of biomass treatment.
- Restoration of historic vegetation patterns where Douglas-fir encroachment is actively converting sensitive forest systems and Environmentally Sensitive Habitat Area. This would be achieved by maintaining dominance of oaks and other hardwood species by thinning select Douglas-fir trees.
- Promoting the health and diversity of coastal scrub and grassland habitats by removing encroaching Douglas-firs that has persisted in the absence of repeated disturbance.
- Control the spread of invasive species within the project area.

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 Coastal Act Section 30107.5). Rarity determinations for habitats and species are made by CDFW, USFWS, and CNPS, and are used to support a CCC ESHA determination. 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 Coastal Act 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:

Significant portions of the project occur within the Coastal Zone of San Mateo and Santa Cruz Counties with the majority considered as ESHA per the Coastal Commission. ESHA, including sensitive natural communities, as referenced in this PSA, cover a significant portion of the proposed treatment areas. Each of these distinct plant communities will require nuanced management techniques, taking into account past and recent disturbance history, and what will be required to ensure that the communities can persist into an uncertain climatic future. The basis of each of these management techniques (treatment activities) is to conduct ecologically restorative treatments with the goal of promoting persistence, resiliency, and an increase in overall health and vigor of the plant species that define each community. This will be accomplished through a myriad of protections, resources avoidance and minimization measures, and Standard Project Requirements detailed within the Coastal Santa Cruz Mountains: State Parks Forest Health Initiative PSA. Standard Project Requirements and Mitigation Measures to protect ESHAs and sensitive natural communities are detailed thoroughly in Impact BIO-3 of the PSA checklist. Additionally, SPR BIO-8 specifically will be implemented to protect Coastal Zone ESHAs, where applicable within the project.

- 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 characteristics of healthy stands of vegetation types present in the ESHA, which will include halting or slowing the encroachment of fast growing woody shrubs and trees into grasslands and shrublands.
- A qualified professional, biologist, or RPF familiar with the ecology of the treatment area will monitor all treatment activities in ESHAs, with the presumption that most, if not all, treatment areas located in the Coastal Zone are considered ESHA based upon existing plant communities and resources.
- Treatment prescriptions have been 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.

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

o 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; 11 and (d) provide for a mosaic of appropriate native plants by age, size, and class that support the overall habitat. 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 single acre of forestland, grassland, and shrubland is only capable of producing a given volume of biomass per year, similar to the principles behind fruit and vegetable production and livestock grazing, whereby a farmer/rancher must determine the appropriate amount and spacing of their crop (or livestock) to produce maximum yields. Within an overly dense forest stand, many trees are competing for access to resources (sunlight, micro and macro nutrients, water, etc.) and thus cubic volume per acre growth. On an individual tree basis, this competition results in less vigorous and resilient individuals, with slower growth rates. Applied on a larger scale, this results in forest stands comprised of smaller, more flammable trees, with increased drought, nutrient, sunlight, and pest stress. Through the thinning of competing vegetation, resources can be allocated to fewer trees per acre, which can promote expedited growth of remaining trees as well as increased tolerance to disturbance such as wildfire, pests, and drought.

Although fuel reduction is often characterized as protecting valuable infrastructure, development, and human health and well-being, the primary focus of forest health projects as they pertain to fuel reduction, is to protect the value of natural resources and the ecosystem functions they provide. Within forested settings along the central Coast of California, old-growth forests are typically comprised of uneven-aged trees, dominated by very large, tall trees with a high, complex canopy. Well-spaced, larger trees, specifically conifers including Douglas-fir and coast redwood, have a host of adaptations to disturbance, and specifically fire. These trees contain thick, insulated bark, which help protect the cambial layer of the tree; they have a high canopy, with minimal ladder fuels connecting surface to canopy fuels; and they have an expansive and interconnected root system that facilitates the transport of critical nutrients and water and provide structure support. These same characteristics, indicative of mature stands, are often absent in younger, second or third growth stands. These stands often exhibit an even-aged stand

structure, homogenous species compositions, and trees that are perpetually competing for limited resources. When these stands are exposed to wildfire, particularly moderate to high intensity wildfire, the result is increased mortality, increased greenhouse gas emissions, and a subsequent loss in carbon sequestration in the years following wildfire. Old-growth, old second-growth, or well managed second-growth stands are comprised of healthier trees, with adequate canopy spacing, and with a diversity of sizes, ages, and species. These factors help influence the intensity and severity of wildfire as well as the resilience of individual trees and the forest stand as a whole.

Based on the best available science, local experience, and recent extensive field investigations and analysis (Kranich and Auten, 2024), State Parks expects that treatments thinning smaller to medium diameter understory trees will yield similar results as described above, in regards to increased carbon sequestration over a longer time scale on larger, healthier, retained trees (except where historic grassland and shrublands are being restored from encroaching trees).

Within the project area, there is a diverse set of plant communities represented. These communities exist due to a diversity in access to resources and disturbance history. Mapped communities within the project area include: tanoak alliance (*Notholithocarpus densiflorus* Alliance), redwood alliance (*Sequoia sempervirens* Alliance), Douglas-fir-tanoak association (*Pseudotsuga menziesii – Notholithocarpus densiflorus / Vaccinium ovatum* Association), madrone forest alliance (*Arbutus menziesii* Alliance), California bay forest and woodland (*Umbellularia californica* Mapping Unit), interior live oak – shreve oak woodland and forest (*Quercus wislizeni – Quercus parvula* (tree) Alliance), glossy leaf manzanita – golden chinquapin chaparral (*Arctostaphylos (nummularia, sensitiva) – Chrysolepis chrysophylla* Alliance), bigleaf maple forest and woodland (*Acer macrophyllum* Mapping Unit), brittle leaf – wooly leaf manzanita chaparral alliance (*Arctostaphylos (crustacea, tomentosa)* Alliance), California buckeye alliance (*Aesculus california* Alliance), Monterey cypress association (*Hesperocyparis macrocarpa* Ruderal Semi-Natural Association), Bishop and Monterey pine alliance (*Pinus muricata – Pinus radiata* Alliance), and Black cottonwood alliance (*Populus trichocarpa* Alliance). Each distinct plant community relies upon different, yet often complimentary management schemes.

Broadly speaking, project designs and field oversight of treatments will focus on promoting a mosaic of forest, shrub, and grassland types, and then maintain those mosaics across the landscape utilizing the suite of management techniques proposed in this document. Treatments will reflect the appropriate fire history for the individual plant community and will seek to maintain or improve the quality of the dominant vegetation as defined in the Manual of California Vegetation. Consistent with the CalVTP, the SPRs identified for use within this project area will avoid unintended consequences of type-conversion within the project area, as well as the maintenance of existing vegetation alliances.

o 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 qualified professional or RPF 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 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 habitat type 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 Vegetation Removal Hierarchy was designed by multiple resource professionals, including multiple qualified California State Parks scientists and specialists and RPF's to focus on thinning and removal of dead, dying, and diseased foliage, the retention of snags and downed woody debris, and removal of native species such as Douglas-fir that are locally and regionally common and persist in the absence of disturbance, effectively type-converting sensitive plant communities through encroachment. All treatments specifications are designed to maintain the extent of mapped Manual of California Vegetation alliances and vegetation communities in the project area, except for instances where disturbance-dependent plant communities (e.g. oak woodlands, coastal grasslands) are being type converted due to encroachment of non-native or woody species (e.g. Doulgas-fir) or lack of disturbance.
>
> See below for specific details on the Vegetation Removal Hierarchy for the Coastal Santa Cruz Mountains: State Parks Forest Health Initiative:

Our treatment activities will follow the following prescription guidelines:

- Removal of select live trees less than or equal (≤) to 16 inches diameter at breast height (dbh) to achieve crown and bole spacing with less vertical and horizontal fuel connectivity, promote the growth of residual trees, and promote habitat restoration;
    - may remove larger trees of any size to meet ecological restoration goals (e.g., removing trees that are hindering resilience by contributing to elevated ladder fuel and canopy connectivity, increasing competition amongst retention trees, or are

otherwise inhibiting healthy habitat function for wildlife and sensitive natural communities, etc.);
    - retain healthy hardwoods and conifers with appropriate canopy spacing, except where Douglas-fir are converting grassland, shrubland, or hardwood forest habitat types through shading, in which case, Douglas-fir may be removed to restore ecosystem conditions

- retain existing standing habitat trees, consisting of standing dead, snags, or live trees with dead portions of stems or branches, to provide habitat for wildlife (e.g., birds and beneficial insects), and provide a food source for birds and other wildlife. Where snags do not present a safety hazard, approximately 4-6 foraging snags and 1-2 cavity nesting snags will be retained per acre;
- retain downed woody debris in strategic locations to maintain forest floor complexity, with a preference for larger, complex logs, totaling approximately 10 tons per acre, while reducing fuel connectivity;
    - target retention for downed woody debris may also be considered as four larger logs (large end greater than 16 inches dbh, approximately 15 feet long)
- prune lower branches of trees 6-15 feet but, not more than 33% of the tree's crown where feasible.
- retain micro-stands of untreated oak trees (i.e., young oak stands that do not have an established, dominant overstory) with a cluster radius of approximately 15-25 feet (30-50-foot diameter), where feasible, with consideration given to steepness or whether this retention could exacerbate fire behavior, or fire behavior proximal to key infrastructure and assets;
- retain micro-stands of oaks (i.e., young oak stands that do not have an established, dominant overstory) spaced approximately 75-100 feet apart, where feasible, with consideration given to steepness or whether this retention could exacerbate fire behavior, or fire behavior proximal to key infrastructure and assets;
- Retain micro-stands of understory vegetation cover and composition that are characteristic of the vegetation alliance as described in the Manual of California Vegetation (Sawyer et al., 2009) or current version, including updated natural communities' data at http://vegetation.cnps.org/). Leave root systems intact for resprouting to achieve a horizontal crown separation of approximately 25 to 75 feet between clusters depending on site-specific characteristics relative to the vegetation alliance being treated, important habitat values, and potential fire behavior. Overall, a minimum of 10 to 25 percent absolute cover per acre of understory vegetation would be retained while maintaining the existing vegetation alliance as described in the Manual of California Vegetation. The percentage retained would depend on if exacerbated fire behavior is expected in proximity to key infrastructure and assets. Patches or clumps of vegetation would be retained across the treatment area to create a mosaic pattern to provide heterogeneity and maintain habitat quality (Strong & Beavis, 2016)
- For appropriate chaparral and coastal sage scrub communities that are not sensitive natural communities, retain vegetation at a minimum of approximately 50 percent and a target of 65 percent in any chaparral-dominated area within the immediate contiguous stand boundary of the vegetation type within a treatment polygon in a mosaic pattern of

patches or shrub islands to maintain a varied level of habitat continuity throughout the polygon, subject to retention standards required pursuant to treatment type, CalVTP SPRs and mitigation measures. Additional considerations are required for sensitive natural communities.

- maintain root systems intact, where feasible, to allow for resprouting; mechanical treatments will target above-ground vegetation with the intent of keeping masticating heads out of duff layers and minimizing direct disturbance to subsurface soil layers, allowing intact root systems to resprout and minimizing impacts to burrowing wildlife;
- chipped biomass should generally average 3 inches in depth and not exceed approximately 6 inches;
- chipped residual material should be minimized in forest gaps or openings where increased biodiversity of herbaceous understory regeneration is more likely;
- mechanical treatments would not be conducted within wet meadows or WLPZs. Some vegetation may be removed by reaching an excavator arm into a wet meadow or WLPZ such that no ground disturbance would occur within wet meadows or WLPZs;
- equipment movement may operate on slopes approximately less than 50%;
    - where mechanized treatments will occur predominantly on slopes less than 40%
- may remove any dead, dying, and diseased trees and hazard trees of any size;
- prepare burn units for prescribed fire.

o 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 project area makes avoiding the use of heavy equipment during treatment infeasible. Appropriate sizes of heavy mechanical equipment will be utilized based on need and when required to achieve project objectives, remaining on existing roads to the extent feasible. The project will implement SPR GEO-2, SPR GEO-7, and SPR HYD-4 as well as several other SPRs and mitigation measures to reduce impacts from heavy equipment use (e.g. limiting heavy equipment use on steep slopes to minimize erosion).

o 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: Herbicide use is proposed for application on non-native invasive species, targeting specific areas where control for invasives is necessary and its use would constitute the least environmentally damaging feasible alternative. All applicable SPRs will be adhered to. When applying herbicide treatments, crew typically search a large area and only apply spot herbicide treatments for isolated patches of invasive species, which has historically been less than 1% of the total search area. Spread across the entirety of the project area, it's expected that herbicide treatments will occur on less than 13 acres total, with approximately 2 acres occurring in the San Mateo PWP, 9 acres occurring within the Santa Cruz PWP, and 2 acres occurring outside the coastal zone.

o 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 is not proposed for use as part of this CalVTP Project Specific Analysis.

o 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 SPR BIO-4 and SPR BIO-9.

Response: Invasive species control will utilize targeted hand herbicide application, hand pulling, cutting, and mowing for the project area. Furthermore, the project will incorporate SPR BIO-6 and SPR BIO-9 for all treatment activities in all vegetation types to limit the spread of invasive species.

o 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: Fencing is not proposed for use as part of this CalVTP Project Specific Analysis.

o 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: Accelerants are proposed for use in this project for pile and broadcast burning. Use of accelerants will primarily include a mixture of gasoline and diesel fuel to promote initial ignition of fuels, however may also include fuses, flares, and other commonly used ignition devices. Helitorches and other drone aerial ignitions may also be utilized to apply accelerants in interior locations where access by personnel on the ground is difficult. Handheld ignition devices will primarily be utilized adjacent to roads, trails, and other features identified as prescribed fire control lines, as well as during the ignition of burn piles.

Prescribed fire managers performing pile burning operations will primarily utilize tools called drip torches, which use a mixture of diesel and gasoline fuel to drip flaming fuel onto receptive fuel beds. The tip of a drip torch consists of a flaming wick, which ignites the fuel mixture as it exits the nozzle tip. Broadcast burning operations may utilize various forms of ignition devices, listed above. In all situations, accelerants will be mixed and poured away from watercourses and other sensitive resources. Additionally, mixing required for aerial ignition operations will occur in predetermined locations in confined mixing stations to mitigate for any potential spills. Through the ignition process, the majority of the accelerant used is combusted immediately, with very little residual accelerant, if any, left unconsumed. Relatively small quantities of accelerants are required to ignite hundreds of acres of vegetation.

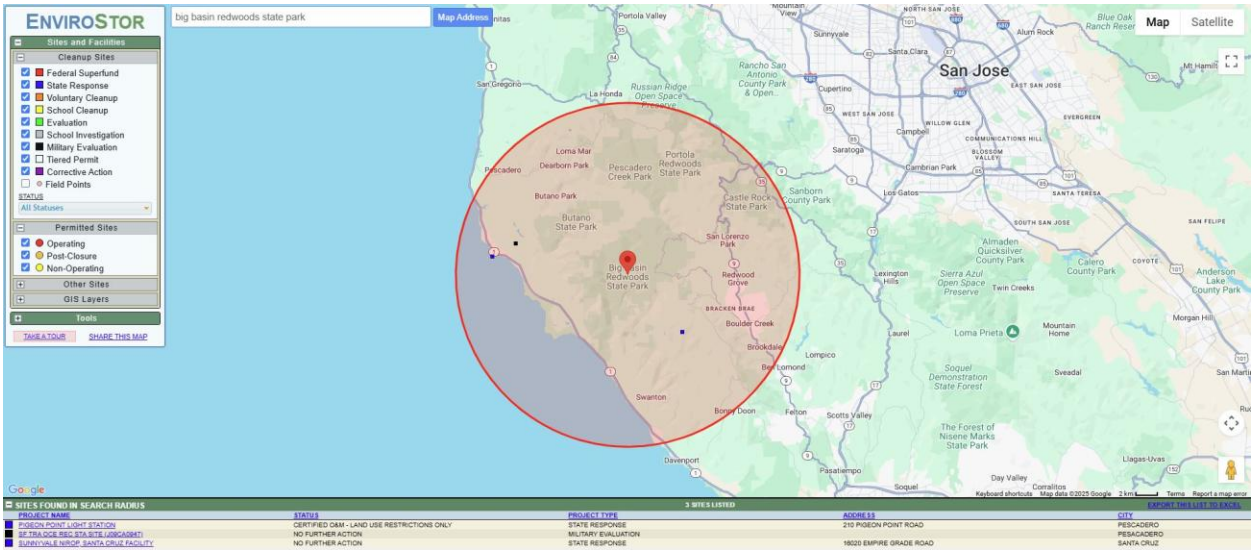
o Soil Stabilization. The use of riprap and/or chemical soil stabilizers that could significantly disrupt or degrade ESHA is prohibited.

Response: No use of riprap and/or chemical soil stabilizers are proposed for use as part of this CalVTP Project Specific Analysis for Big Basin, Año Nuevo, and Butano State Parks, and adjoining properties owned by the Sempervirens Fund and Save the Redwood League included in this PSA.

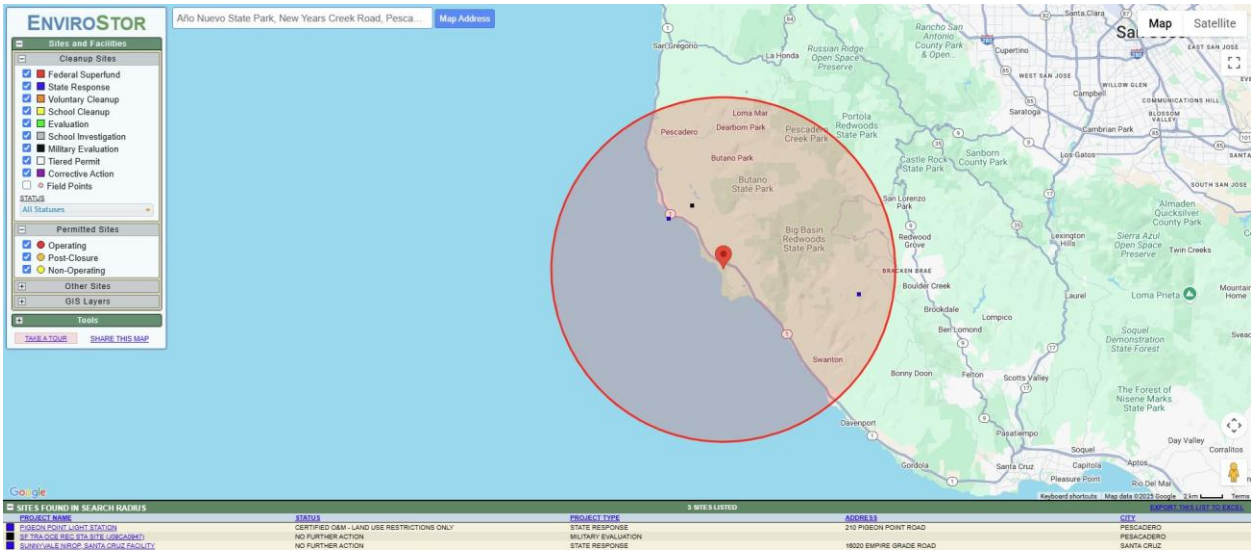
o Protect Coastal Public Access and Recreation. Forest Health projects and Fire Prevention projects shall ensure that coastal public access and recreational opportunities are preserved during project operations to the maximum extent feasible, including by, but not limited to, minimizing trail closures, 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: This project occurs in portions of Big Basin, Año Nuevo, and Butano State Parks. Prior to the CZU fire, these parks were open for numerous recreational activities including hiking, biking, horseback riding, backcountry camping, and day-use. Following the CZU Fire, the parks are now open for limited recreational activities. With the expectation that park-use will increase throughout the life span of this project, every effort will be made to minimize impacts to coastal public access and recreation. All applicable SPR's within the CalVTP PEIR will be applied to this project to minimize impacts to coastal public access and recreation. The properties in the project area owned by the Sempervirens Fund and Save the Redwoods League do not provide public access to the coast or recreation. Therefore, the project would have no impact on coastal public access or recreation on those portions of the project.

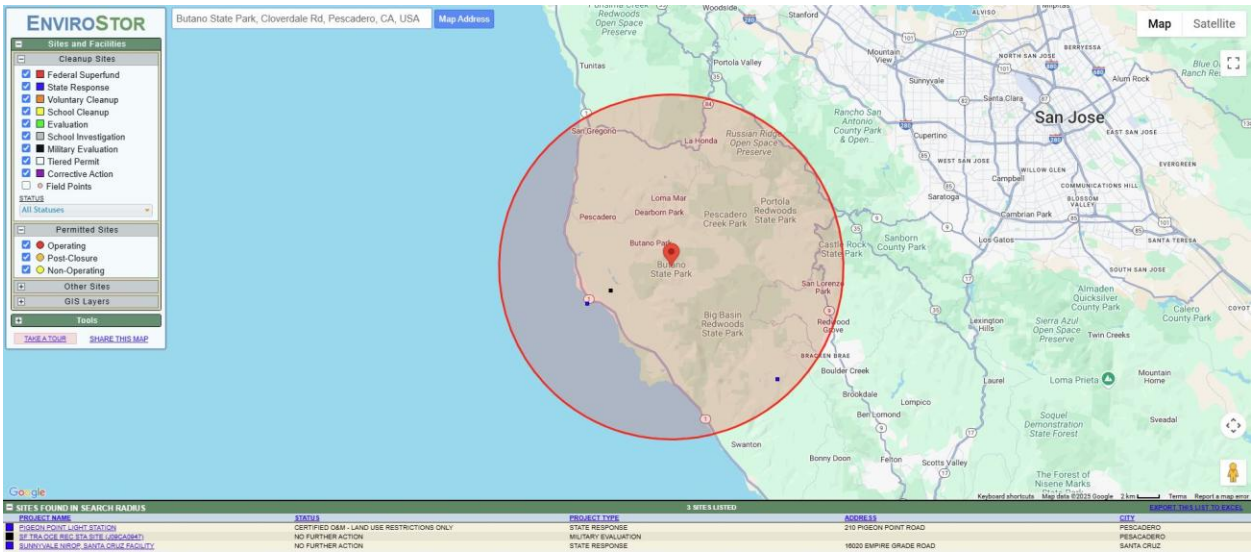
Attachment F: Hazardous Waste Sites Search



Attachment F – Figure 1: Hazardous Waste Site Search within 10 miles of Big Basin Redwoods State Park.



Attachment F – Figure 2: Hazardous Waste Site Search within 10 miles of Año Nuevo State Park



Attachment F – Figure 3: Hazardous Waste Site Search within 10 miles of Butano State Park

Attachment G: Foothill Yellow-legged Frog FEMA EHP Review Letter

September 4, 2023

RE: FEMA EHP Review

This letter is regarding the FEMA EHP review for the areas within Big Basin Redwoods and Butano State Parks which were burned in the 2020 CZU Lightning Complex Fire. As Senior Environmental Scientist for the Santa Cruz District, the issue regarding Foothill yellow-legged frogs (*Rana boylei*) has been referred to me for a response.

I am aware of the recent Federal Register (8/29/2023) listing Foothill yellow-legged frogs (FYLF) as a threatened species. The parks in question are both located in Santa Cruz and San Mateo Counties which are called out as being within the Central Coast Distinct Population Segment for FYLF.

However, FYLF are not currently found within nor have they been documented within Big Basin in 70 years. FYLF have never been documented in Butano. Both Parks have been thoroughly surveyed on numerous occasions for the purpose of resource inventories or in preparation for projects or special documents like General Plans.

We use a program called California Natural Diversity Database (CNDDB) managed by the California Department of Fish and Wildlife (CDFW) to document and track rare/sensitive species. A CNDDB search for FYLF returns 27 occurrences in Santa Cruz County. Of these, two reported occurrences are found in the Big Basin Quad Map near the town of Boulder Creek, they are documented from 1892 and 1941. These are not near Big Basin, but 13 miles away. One reported occurrence is from the Ano Nuevo Quad Map in 1953 in the Waddell Creek drainage which is in or near Big Basin. However, this report indicates that the FYLF may be extirpated from Waddell Creek. No FYLF have been documented in Waddell Creek by local fisheries biologist Jerry Smith who has been surveying the creek multiple times per year for 30 years.

A CNDDB search for San Mateo County returns 12 occurrences. Only one report is of note, it is found on the La Honda Quad Map from Pescadero Creek in 1999. This is the closest, most recent and only occurrence within the last 60 years. However, Pescadero Creek is at 13 miles, quite far from Butano.

In summary, no FYLF are documented near Butano (within 13 miles) in San Mateo County. While there have been reported sightings in the vicinity of Big Basin, FYLF were last documented 70 years ago.

Currently, in Santa Cruz County FYLF are only found within/near the Soquel Creek drainage which is far (30 miles) from the Parks in question. I've spoken with my colleagues, Terris Kasteen and Laura Patterson with CDFW to confirm that this is indeed the only known and confirmed location for FYLF in this area.

Based on the abundance of evidence that FYLF are not present in these Parks, no additional survey work to document absence of FYLF is needed.

Sincerely,

Portia Halbert
Senior Environmental Scientist
California State Parks
831.335.6386

CC: Terris Kasteen
Laura Patterson
Jerry Smith

Attachment H: Avoidance Measure Recommendations for Marbled Murrelets in the Santa Cruz Mountains Following the CZU Lightning Complex



Avoidance Measure Recommendations for Marbled Murrelets in the Santa Cruz Mountains Following the CZU Lightning Complex

AUGUST 2022

Prepared by:

California State Parks
Santa Cruz District

Portia Halbert
Senior Environmental Scientist

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Introduction

Federally threatened and state endangered marbled murrelets (murrelet) nest in the large wide branches found in old growth redwood and Douglas-fir forests. Beginning in 2006, the US Fish and Wildlife Service (USFWS) issued a memo from the Arcata office that outlined potential impacts to murrelets from human generated noise (USFWS 2020). Since that time, State Parks and other landowners have been using the guidance found in this memo to seasonally restrict noise-generating activities.

In August of 2020, the CZU Lightning Complex Fire (CZU Fire) burned 86,509 acres in the Santa Cruz Mountains (SCM) including nearly 70% of the marbled murrelet breeding habitat. Overnight, marbled murrelets experienced a significant loss of habitat in moderate high and high severity burn areas. This fire, along with other recent megafires in California, led to the Governor funding a Wildfire and Forest Resilience Program (WFRP) to address the fuel build up from nearly 200 years of fire suppression.

With recent and more severe wildfires expected in the face of climate change, there is a need to conduct more restorative forest treatments to benefit murrelets. The operational window to implement these treatments is limited by the guidance in the USFWS memo and seasonal wet weather requirements often bounding operations near murrelet areas to very small windows each year, sometimes only 30 days.

The purpose of the document is to evaluate whether there may be localized differences in marbled murrelet behavior supporting wider operational windows, still providing appropriate avoidance measures for murrelets in low to moderate fire severity areas where habitat still exists during the breeding season. A rationale is presented for adjusting the marbled murrelet season for conducting high decibel activities in proximity to murrelet areas beginning August 5th, rather than September 1st. Except for Portola State Park to Pescadero Creek County Park marbled murrelet important areas where August 15th is appropriate and Gazos Mountain Camp marbled murrelet important areas in Butano State Park where September 1st is appropriate; continued survey efforts in these locations will monitor post-CZU Fire behaviors to determine if changes to the operational windows are appropriate. In addition, in areas of low to moderate fire severity where habitat still exists, this document provides a rationale for reducing buffers to 330 feet near occupied or important murrelet areas to allow larger handwork crews and mastication equipment to conduct forest restoration and resiliency treatments greater than normal routine maintenance actions, from March 24th to August 5th. This basis results from an analysis on the effects of sound on murrelets and recent sound analysis work conducted on San Mateo County Parks and State Parks lands.

The following information examines the results of various survey methods and monitoring efforts in the Santa Cruz Mountains; Audio Visual (AV), Radar, and Acoustic Recording Units (ARU) data, including a summary of information on the effects of noise and a recent sound work conducted to evaluate various decibel levels of equipment against ambient noise levels implementing forest restoration treatments to support the rationale for the proposed recommendations.

Monitoring

In order to inform options for adjusting the work period, we need to consider what we know about murrelet use of their forest habitat. There are four survey types available to land managers to monitor marbled murrelets: At Sea Surveys, Inland Forest Audio-Visual (AV) Surveys, Radar Surveys, and

Audio Recording Units (ARU). Of these four types, At Sea Surveys don't reveal much about forest use, leaving the three survey methods available to examine murrelet's seasonal use of forest habitat.

Audio-Visual (AV) Monitoring

Since 1974, many ground based forest surveys were conducted looking for nests in trees with appropriate limbs and platforms that could house murrelets in the Santa Cruz Mountains, with the first nest for the species discovered in Big Basin State Park. AV surveys have been the primary means of monitoring murrelet use of forest habitat through watching their flight patterns and listening for their sound indicating where possible nesting activities may be occurring.

These surveys have limitations, including significant temporal and spatial variability of murrelet use of the forest, weather challenges (fog or mist), observer bias, auditory bias and other unknown factors. Normally, AV surveys are conducted during July, which is considered the peak of the breeding season. Survey efforts are costly, so there are limited AV surveys after July 31th. Because information about murrelet use of the forest late in the season is limited, known monitoring from the Santa Cruz Mountains in August are included in Tables 1 – 7.

This first monitoring example and discussion of survey data includes excerpts taken from Singer & Hamer 1999 in Tables 1, 2, and 3. These show the increase in activity in June and July and the slowing down of the breeding season to minimal detections in early August at Gazos Mountain Camp (Gazos Mtn. Camp).

Table 1 Results of 1999 Early Season AV Surveys, Singer and Hammer – Gazos Mtn. Camp

Date	% Overcast	Number of Detections (# heard-only)	Number of Occupied Behaviors	Number of Single Silent Birds Below Canopy
6/1/99	100	15 (13)	0	0
6/4/99	100	109 (64)	30	7
6/6/99	50-100	32 (16)	12	0
6/7/99	0-50	19 (12)	5	0
6/9/99	0-80	14 (7)	5	0
6/11/99	0-20	17 (5)	7	0
		x = 34.33	x = 9.83	

Table 2 Results of 1998 Mid-season AV Surveys, Singer and Hammer – Gazos Mtn. Camp

Date	% Overcast	Number of Detections (# heard-only)	Number of Occupied Behaviors	Number of Single Silent Birds Below Canopy
7/14/98	0	41 (24)	16	10
7/16/98	0	42 (31)	10	3
7/17/98	20	18 (12)	5	1
7/18/98	0	28 (18)	7	3
7/20/98	100	49 (27)	13	4
7/22/98	100	38 (24)	13	3
		x = 36.00	x = 10.66	x = 4.00

Table 3 Results of 1999 Late Season AV Surveys, Singer and Hammer – Gazos Mtn. Camp

Date	% Overcast	Number of Detections (# heard-only)	Number of Occupied Behaviors	Number of Single Silent Birds Below Canopy
8/12/99	100	7 (6)	1	0
8/13/99	0-95	0 (0)	0	0
8/15/99	100	0 (0)	0	0
8/16/99	100	0 (0)	0	0
8/18/99	100	1 (0)	1	0
8/20/99	0-90	0 (0)	0	0
		x = 1.33	x = 0.33	

A comparison of Tables 1 and 2 shows generally higher numbers of detections in July 1998 than in June 1999, although an exceptionally high number of detections on June 4, 1999 skews the 1999 average upward to approach the 1998 average value (34.3 and 36.0, respectively). These data show that either June or July is better than August for implementation of ground protocol surveys where the objective is to monitor occupied behaviors or other visual and/or auditory behaviors indicative of murrelet nesting in the vicinity.

A comparison of Tables 1 and 3 shows a dramatic decrease in the number of murrelets detected at Gazos Mountain Camp in Butano State Park in the late season compared to the early season. In the June period, murrelets were detected every day with the number of detections ranging from 14 – 109, whereas in August, murrelets were only detected on two days, with 1 and 7 detections recorded. As will be discussed later, there was a similar decrease in the number of radar detections in the Gazos Creek Canyon, a survey location also referred to as Double Low Gazos. This data strongly suggests that most breeding activities had terminated by August 12. Ground surveys from other areas of the Santa Cruz Mountains in previous years also show a decline in inland detections by mid-August (Singer, unpublished data).

Occupied behaviors are recognized as indicators of murrelet nesting in suitable habitat nearby (Pacific Seabird Group; Marbled Murrelet Technical Committee 1994). Occupied behaviors include behaviors such as perching, landing, or attempting to land on branches, flying below tree canopy height, or circling above canopy height. Other than landings, which are rare, the number of single silent birds detected flying below the canopy is arguably the best flight behavior indicator of an active nest nearby. Single birds flying below canopy are often associated with incubation exchanges or feeding visits to a nest (Singer et al 1995). A comparison of Table 2 against Table 1 and 3 shows that an active nest was likely present in July, 1998 due to the amount of occupied behavior and single silent birds below canopy flights ranging from 1-10 on all recorded survey days, but not in June or August of 1999. Note that no single birds were seen in August. These findings suggest that June and July are the best time of year to look for the presence or absence of occupied behaviors related to nesting at Gazos Mountain Camp.

In a second example, surveys documented by Suddjian (Suddjian 2001) from 1991-2001 at Big Basin State Park included only one survey in August, conducted on August 1st, 1998, which resulted in 9 detections. In comparison to the 99 other survey mornings, many of which had detections in the 100- 200 range in June and peaking in mid-July, the August 1, 1998 survey was at the very low end of detections. It should be noted that in 1998 detections were on a downward trend with respect to other survey years, the only other survey days with such low detections were in 2001. Additionally on this day in 1998, no fog was present, which is more likely to result in fewer detections than days when fog is present.

Many surveys were conducted between 2001 and 2021 focusing on June and July with few other surveys in August. Surveys by Suddjian from 2003-2009 and State Park AV surveys in the Santa Cruz Mountains from 2014-2021 did not include any surveys in August. One other year with August AV surveys is known and discussed in Table 4 from Klamath Wildlife Consulting who conducted AV surveys from 2010-2012 and several surveys were done in early August 2010. Most sites were surveyed a total of three times concurrently; one time in June, July and August, with the exceptions of Ben Reis in Butano State Park which was not surveyed in August, and four sites were surveyed multiple times in June and July.

Table 4 Results of AV Surveys in 2010

Date	Location, Park	June Detections	July Detections	August Detections
August 2	Iverson Trail, Portola	31	23, 33, 82	32
	Peters Creek, Portola	18	16, 41, 72	18
	Memorial, Memorial County Park	19	10	4
August 3	Blooms Creek, Big Basin	0	8	0
	Huckleberry Camp, Big Basin	0	1	0
	Sempervirens, Big Basin	0	2	0
August 4	Redwood Meadow, Big Basin	7	37	2
	100 Acre Woods, Big Basin	1	5	0
	Sequoia Flat, Memorial Co. Park	1	8	3
August 5	Little Butano, Butano	42	122	22
	Girl Scout Camp, Butano	8	7, 9, 14, 2, 6	2

Tables 1-4 show August AV surveys mostly resulted in notably fewer detections. These numbers primarily show that the peak of the murrelet season is in July and is tapering off in early August or sooner, where the highest recorded August detections occurred on August 2, 2010 and August 5, 2010 with 32 and 22 detections respectively (Table 4) and the next highest detections following August 5th occurred on August 12, 1999 with 7 detections (Table 3). In two of the more active sites at Portola State Park we see this trend continue, with a similar number of detections into early August as detected in June (Table 4).

Parks will continue to use AV surveys to inform management during the busy peak season in July. However, it is still cost-prohibitive to add surveys to August. Additionally, the PSG Survey Protocol is currently in revision and any changes to it, during the time of this document's life, will be adopted.

Radar Monitoring

Several years of radar work conducted by Singer and Hamer (1999) document murrelet movements into and out of habitat. Several sites were monitored most years from 1998 – 2010. By 2001 it was determined that radar monitoring would best be done in June or July because of the apparent rise of Coefficient of Variation values in August associated with generally lower detections of all types. Therefore, only 1998-2001 include any surveys in August; 1998 and 1999 results are shown in

Table 5 and 6. Again, in comparison to AV monitoring, radar monitoring shows significant drops in detections in August. Radar units can be advantageous because they can detect silent birds in low light or dense fog over a larger area than AV surveys. Additionally, radar units can record flight information, such as direction, speed, and behaviors.

Table 5 Results of 1999 radar surveys for marbled murrelets at Double Low Gazos, also called Gazos Creek Canyon. Values for the mean (x), standard deviation (s.d.), and coefficient of variation (C.V.) are given at the end of the August values in each column.

Date	% Overcast	Number of Detections	In-bound Detections	Out-bound Detections	Other Detections
June 1999					
6/8/99	45 – 85	33	15	18	0
6/9/99	100	34	17	15	2
August 1999					
8/10/99	100	7	1	4	2
8/11/99[1]	100	10	4	2	4
8/12/99	100	9	1	4	4
8/13/99	0 – 5	10	2	8	0
8/15/99	100	1	0	0	1
8/17/99	100	5	2	3	0
8/19/99	100	9	3	4	2
8/21/99	75	8	1	5	2
		x = 7.38 s.d. = 2.05 C.V. = 0.28	x = 1.75 s.d. = 1.28 C.V. = 0.73	x = 3.75 s.d. = 2.31 C.V. = 0.62	

[1] Twelve minutes of survey period lost due to rain

Table 6 shows the results of nine radar surveys conducted at other locations in 1999 and 1998 to collecting detection values for other nearby canyons to compare with Gazos Creek Canyon (Table 5).

Table 6 Results of radar surveys at other canyon locations in proximity to Gazos Creek Canyon (1998-1999)

Date	Location	% Overcast	Number of Detections
July 1998			
7/18/98	Waddell Creek	0	31
7/19/98	White House Cyn. #1	100	14
7/23/98	White House Cyn. #1	100	7
June 1999			
6/11/99	Pescadero Creek #1	100	22
6/12/99	White House Cyn. #2	40	8
6/13/99	Big Butano Creek	100	21
6/14/99	Waddell Creek	100	52
August 1999			
8/16/99	Pescadero Creek #2	100	2
8/20/99	Waddell Creek	0	10

Table 7 shows five radar surveys conducted at other sites in 2000 collecting detection values for other nearby canyons to compare with Gazos Creek Canyon results from 1999 and 1998 (Table 5). The value at Station Pescadero Creek #2 for mid-August shows the decrease in the number of detections for this area by mid-August, again indicating significant drops in detections in August.

Table 7 Results of radar surveys for marbled murrelets at other locations in the Santa Cruz Mountains, 2000, compared to detections recorded at these sites in 1998 and 1999

Station	Location	2000 Total Detections and (Date)	Prior Year Detections and (Date)
Hill 621	Cloverdale Ranch	47 (7/12/00)	28 (7/14/98)
			23 (7/17/98)
Pescadero Creek #2	Dearborn Park	74 (7/21/00)	2 (8/16/99)
Big Butano	Butano Canyon	55 (7/19/00)	21 (6/13/99)
Little Butano	Butano State Park	24 (7/20/00)	27 (7/21/98)
White House Cyn. #1	Cascade Ranch S.P.	12 (7/22/00)	14 (7/19/98)
			7 (7/23/98)

In combining August detections from Table 5 and 6 from various survey locations, the average number of radar detections between August 10, 1999 and August 21, 1999 is approximately 7.1. In comparison, June 1999 averaged approximately 28.3 radar detections at various locations (Table 5 and 6) and July 2000 averaged approximately 42.4 radar detections at various locations (Table 7). Overall, Tables 1-7 predominantly indicate significant drops in detections resulting from AV and radar surveys, and likely breeding behavior, at the beginning of August in many locations and early August in areas like Gazos Mountain Camp (Table 3).

Although not from the Santa Cruz Mountains, it is worth noting the research conducted by Sanzenbacher et al. (2014) looking at year-round flights using marine radar at three high use sites in Northern California (n = 78 mornings). Murrelet passage rates were relatively low in winter (11%–47% of summer rates), increased in spring, peaked during the summer breeding period (late April–July) and were lowest during the fall molt period adding parallel consideration that there is a significant drop off activity in August in other locations in California.

ARU Monitoring

Lastly, surveys can be conducted through autonomous Acoustic Recording Units (ARU). Borker et al. (2015) tested their use as a cost-effective way to detect the presence of marbled murrelets at

inland sites, and to provide comparable metrics on the relative rates of acoustic activity at a large scale. Specifically, they compared the results of traditional AV counts by human observers to data from automated acoustic surveys at sites in Big Basin and Butano State Parks. Analysis of the data showed that automated surveys detected murrelet calls at all of the sites where human AV surveys also detected them. On average acoustic sensors detected fewer calls per morning than human observers stationed at the same survey sites, but the detection rate between the two methods was significantly correlated (i.e. acoustic sensors detected more calls where people counted more murrelets and vice versa). In addition, the study suggested that automated surveys could improve the statistical power of monitoring efforts by reducing several sources of sampling error common in traditional audio-visual surveys such as low sample size, high sampling variability, and observer bias. Table 8 shows the year and number of ARU units deployed.

Table 8 Year ARU's deployed, number of ARU's deployed, and Notes

YEAR	# ARU	Notes
2010	6	Borker's initial sensor research
2017	3	--
2018	3	--
2019	3	Minor software issues
2020	3	Significant software challenges not all mornings recorded correctly
2021	12	Four ARUs did not record, and minor software issues present

Figure 1 below shows Borker's 2010 ARU data expanded in graph form. Graphed ARU results depicted by the thick black line show the mean call rate per minute, by day, for murrelets during peak calling period ± 30 minutes from sunrise. The black triangles indicate AV survey efforts. All of Borker's results indicate a significant drop in murrelet activity before August or in early August again represented by Gazos Mountain Camp. Borker's ARU deployment occurred at the following locations: Gazos Mountain Camp (GMCA), Girl Scouts Creek (GSCR), Huckleberry Camp (HUCK), 100-Acre Woods (HUND), Little Butano (LBUT), Redwood Meadow (RDMD), and Sempervirens Camp (SEMP).

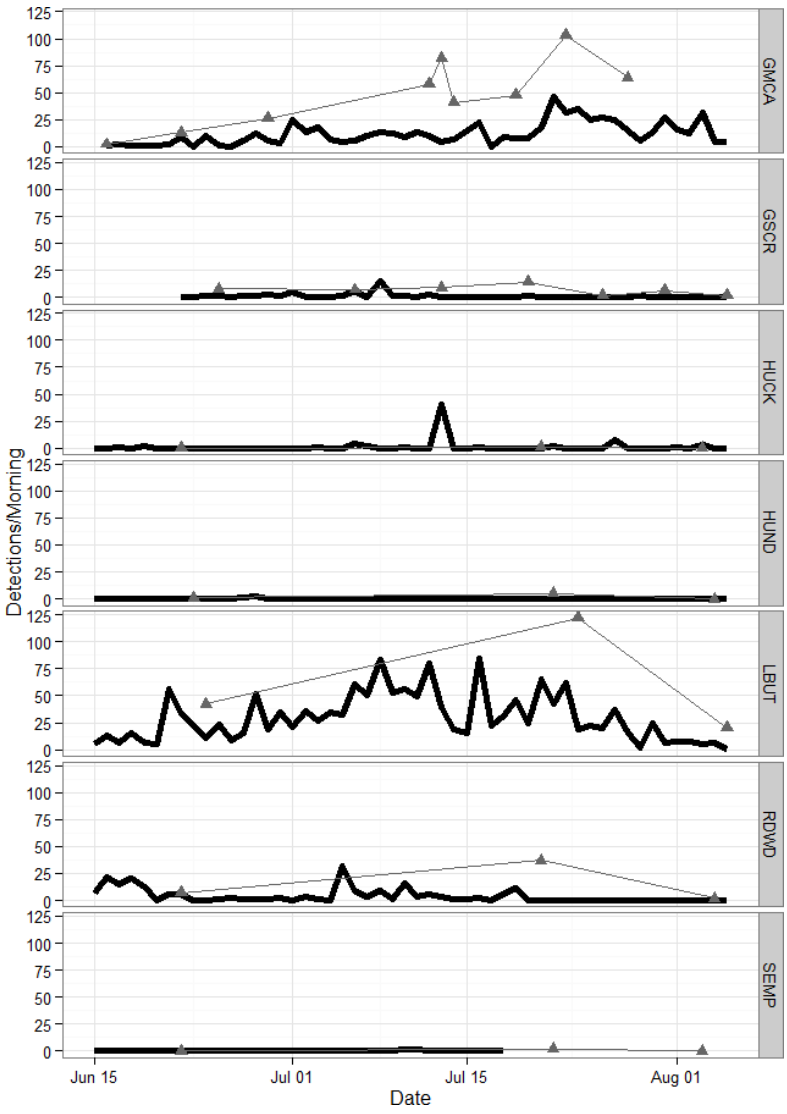


Figure 1 Borker's 2010 deployments of ARU's at different locations in the Santa Cruz Mountains

Figure 2 shows State Parks results from 2017 showing no detections after August 1st at two of the sites. Gazos Mountain Camp again having some detections in August consistent with Borker's 2010 ARU data from Figure 1.

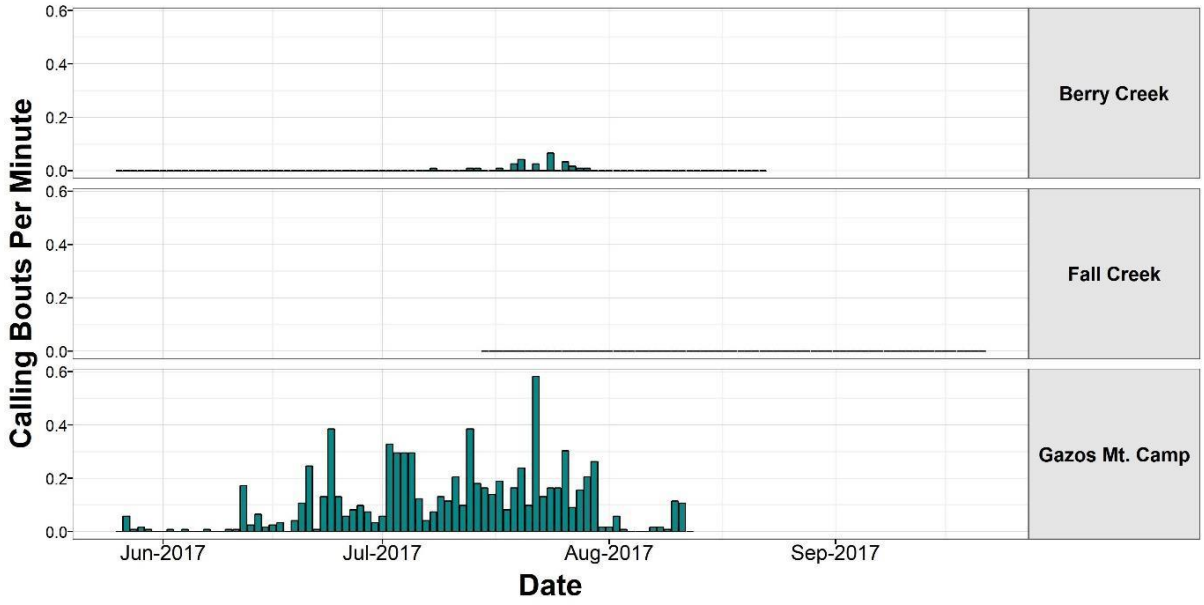


Figure 2 ARU – 2017 Calling Bouts per Minute at Berry Creek, Fall Creek, and the Gazos Mt. Camp

Figure 3 shows State Parks results from 2018, two ARUs show no calls after August 1st. Gazos Mountain Camp continues to have call detections into August.

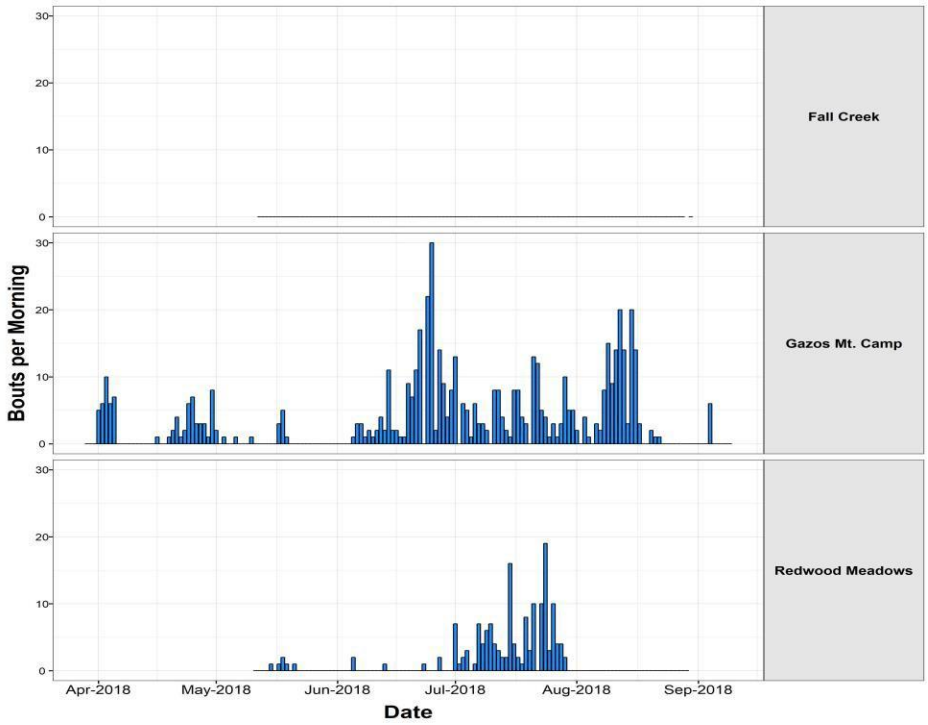


Figure 3 ARU – 2018 Calling Bouts per Minute at Fall Creek, Gazos Mt. Camp, and Redwood Meadows

Figure 4 shows State Parks results from 2019, two ARUs show no calls after August 1st. Gazos Mountain Camp continues to have calls after August 1st.

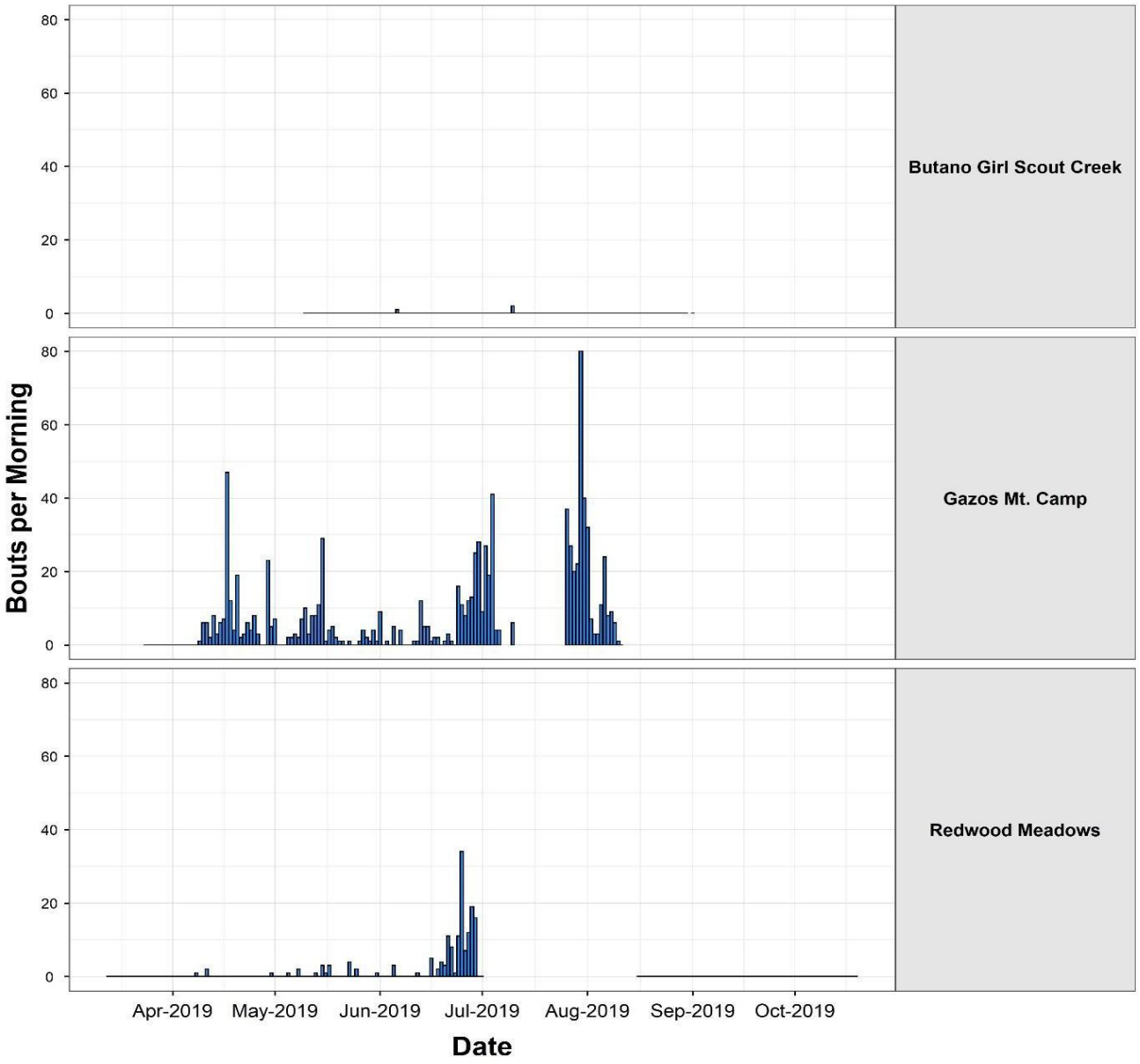


Figure 4 ARU – 2019 Calling Bouts per Minute at Butano Girl Scout Creek, Gazos Mt. Camp, and Redwood Meadows

Figure 5 shows State Park results from 2020, two of the sites have no calls after August 1st and Gazos Mountain Camp had no calls after approximately August 1st. Note that breaks in the line on the X- axis represent days that the ARUs began to experience issues with not recording on some days. Solid lines on the X-axis with no Y-axis variation represent days that the ARU recorded but did not have detections.

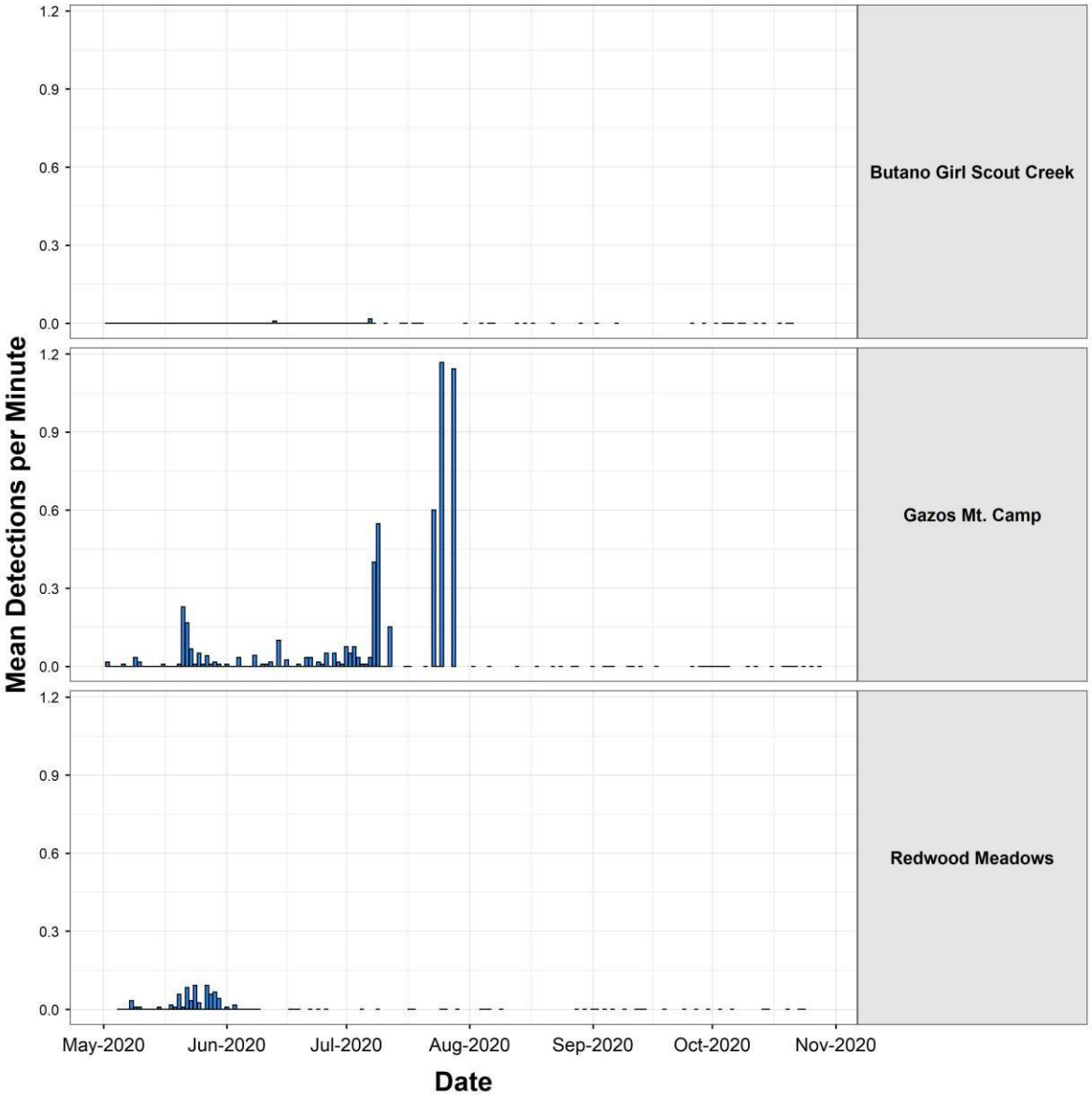


Figure 5 ARU – 2020 Calling Bouts per Minute at Butano Girl Scout Creek, Gazos Mt. Camp, and Redwood Meadows

Figure 6 shows State Park results from 2021 (post-CZU Fire) at eight locations showing almost no detections after August 1st including the Gazos Mountain Camp.

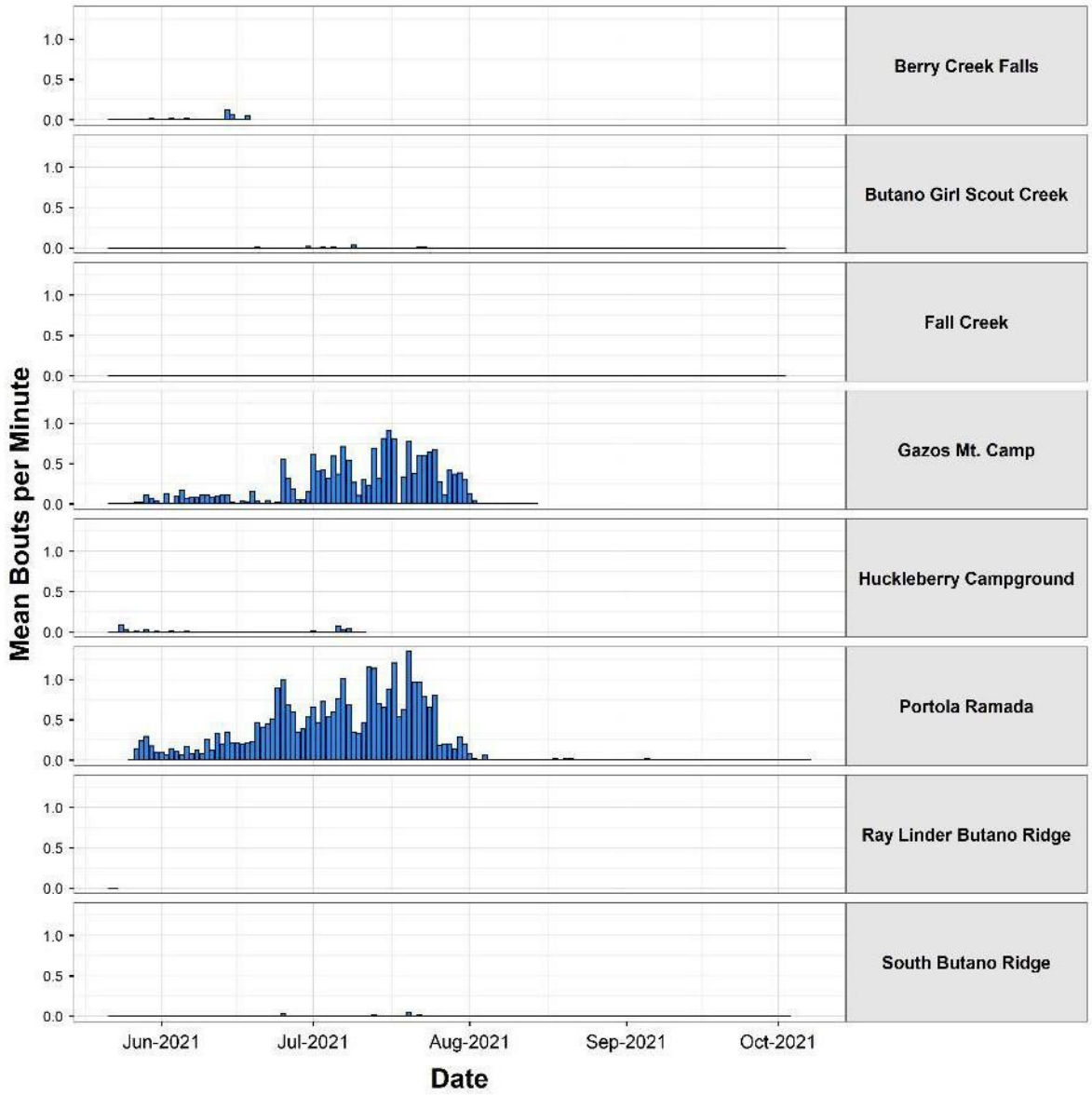


Figure 6 ARU – 2021 Calling Bouts per Minute at Berry Creek Falls, Butano Girl Scout Creek, Fall Creek, Gazos Mt. Camp, Huckleberry Campground, Portola Ramada, Ray Linder Butano Bridge, and South Butano Ridge

Figure 7 shows San Mateo County Parks ARU data in 2021 (post-CZU Fire) with results showing similar patterns as the State Park sites, two locations had no detections in August and one location had some detections in early August only.

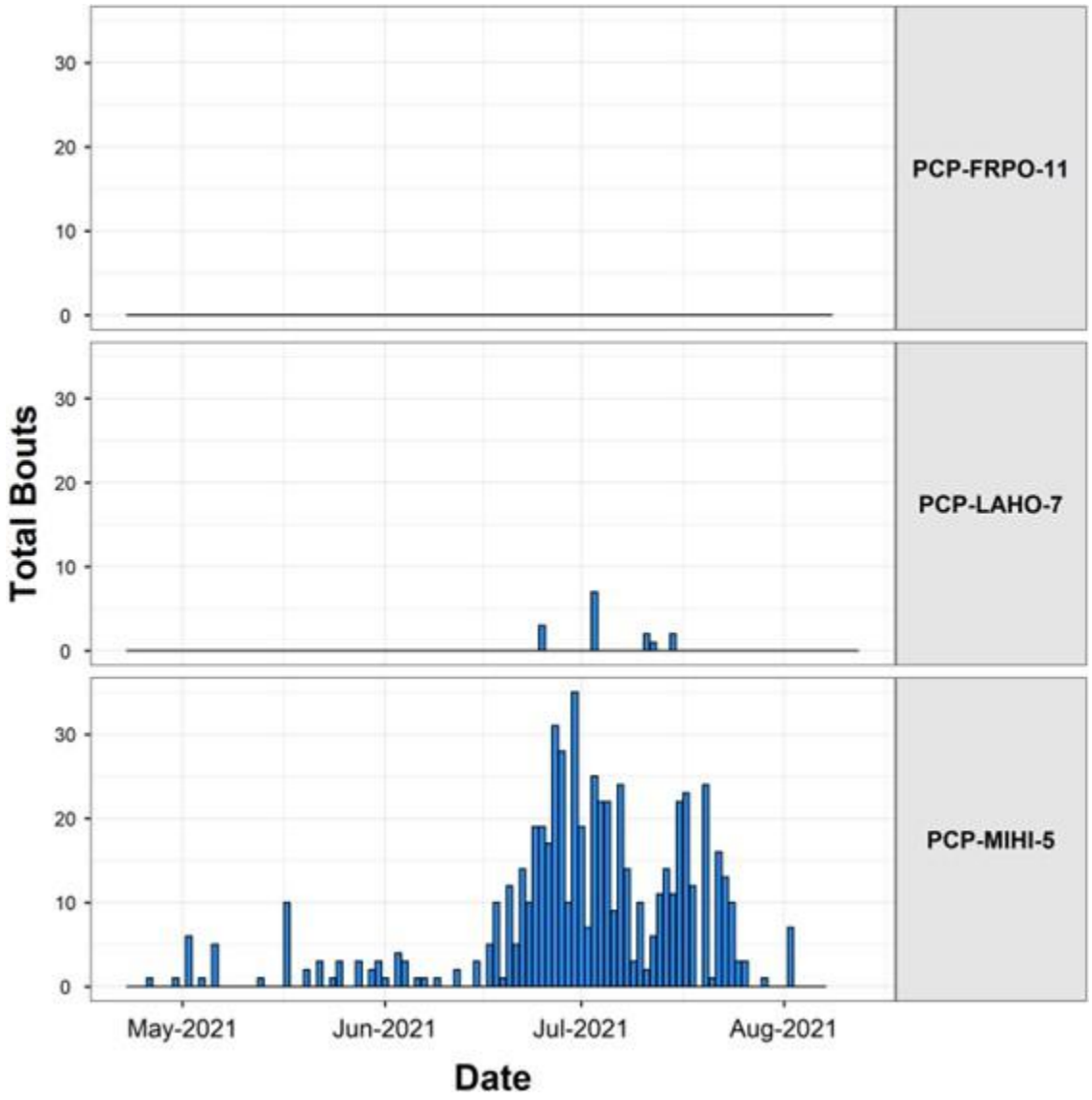


Figure 7 ARU – 2021 San Mateo County Parks Calling Bouts per Minute PCP-FRPO-11 (Rhododendron Creek), PCP-LAHO-7 (Camp Jones Gulch), PCP-MIHI-5 (Tarwater Creek)

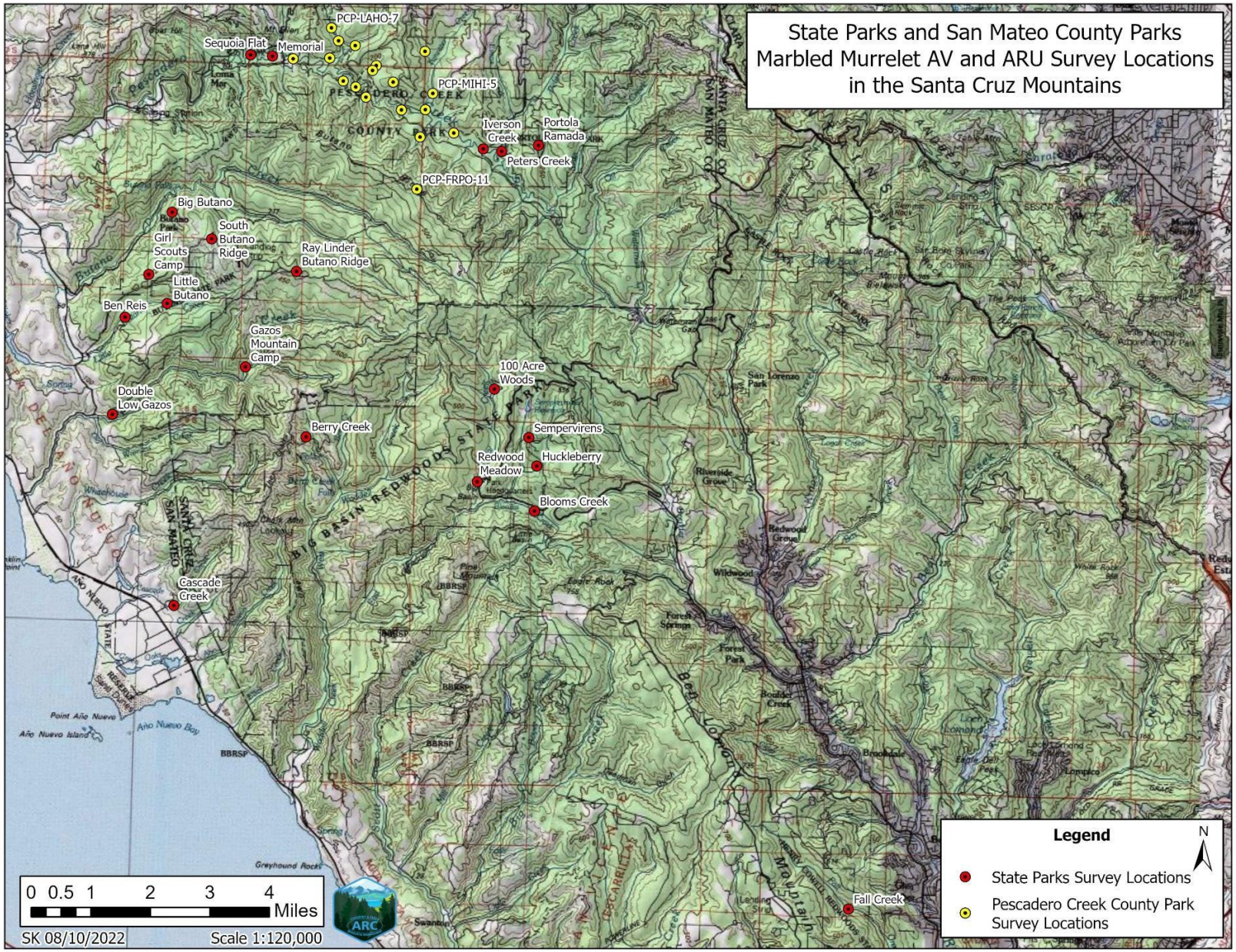
Another additional set of ARU data cited here comes from Forester Nadia Hamey, from Hamey Woods, working with Save the Redwoods League in Peters Creek (adjacent to Portola State Park) and at the Cascade Ranch indicating that all three sites show drops to zero for murrelet activity by the beginning of August (Hamey 2020).

ARU Data Summary

In summary, the results from 2010, 2017, 2018, and 2021 in State Parks, 2021 in San Mateo County Parks, and Hamey Woods 2020 in Peters Creek show a notable drop in activity at the end of July. With the exception of Gazos Mountain Camp, which had quite a bit of calling activity through mid- August in 2018 but appear to notably drop in 2020 and 2021. It should be recognized 2019 and 2020 showed inconsistencies due to software related issues for State Park ARU's. There were periods of higher call detection during the late July-August period of 2019 at Gazos Mountain Camp as well. From this ARU data, Matthew McCowen, principal ARU researcher says "that vocalizations typically peak between mid-June and August 1, but that detections can continue into mid-late August at high activity sites." With this in mind, it would be appropriate to restrict noise producing management actions around these high activity sites like Gazos Mountain Camp into August during the breeding season.

The culmination of data from AV, Radar, and ARU among the different entities provided here are likely the most inclusive data available for inland movements of marbled murrelet for the Santa Cruz Mountains. They represent the best available data set and indicate that most locations would avoid impacts to marbled murrelet with high decibel activities starting after August 5th, except for marbled murrelet important areas within Portola State Park and Pescadero Creek County Park where activities could begin on August 15th and marbled murrelet important areas within Gazos Mountain Camp where activities could begin on September 1st.

ARU information will likely be the best monitoring tool in August going forward given the prohibitive cost for AV monitoring during this low use time period. Parks will continue to use ARUs to monitor through August at many different locations throughout the range in areas of interest.



AV and ARU Survey Stations Location Map

Grounded Fledglings and Chicks

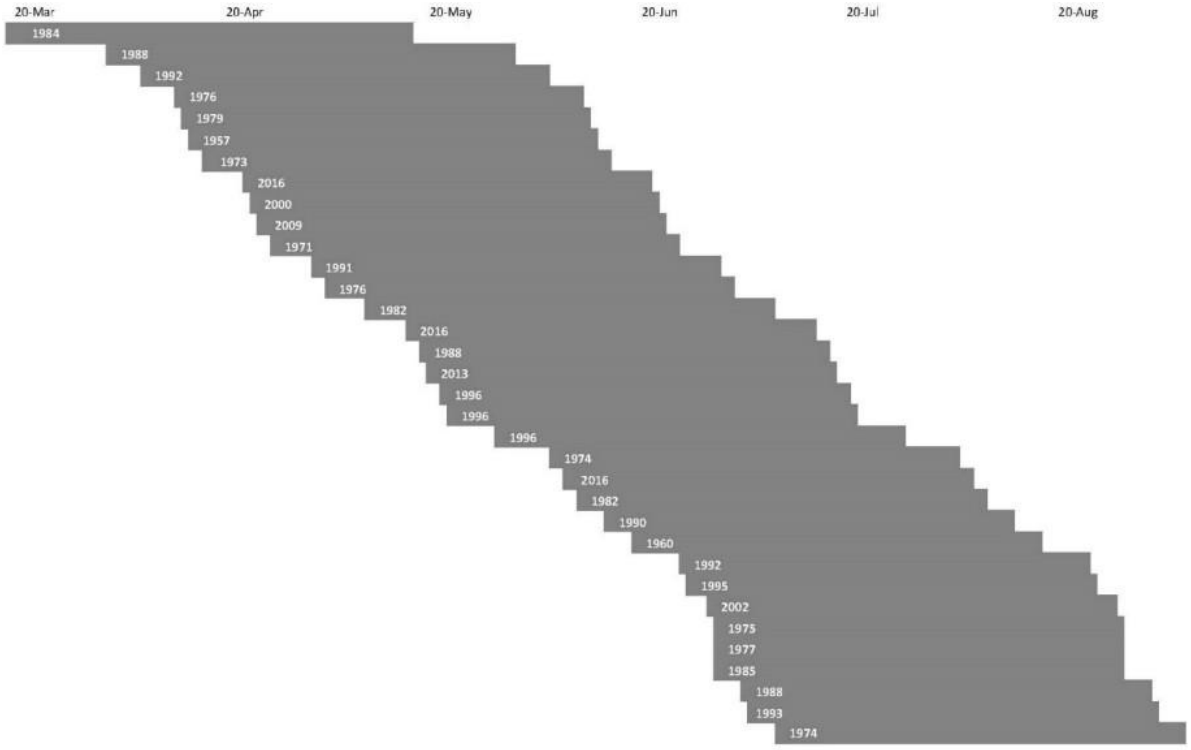
There have been 63 documented instances of nesting in the Santa Cruz Mountains, 21 nests, 6 eggshells, 2 chicks, and 35 grounded fledglings (LMP, 2017). Although findings are incidental it can be useful to consider when murrelet fledglings and chicks have been found on the forest floor. Below is a chart (Figure 1) of the nesting chronology of marbled murrelets based on 30 grounded fledglings in the Santa Cruz Mountains. For grounded fledglings, the date of discovery is assumed to be within one day of the fledge date, and the egg-laying date is assumed to be 60 days prior[2] (LMP, 2017). Of these 35 grounded fledglings 37% have been found after August 5th.

This section is quoted from the LMP:

"However it is unlikely that a pair would wait until July to lay their first egg and initiate nesting. It is more likely that murrelets start nesting in late March or April and that the late fledgling birds are the result of a replacement egg laid after the failure of the first nest.
Replacement laying, i.e. laying of a new egg after the first fails, is common in other parts of the murrelets range (McFarlane Tranqulilla et al. 2003) and is believed to be common in the Santa Cruz Mountains as well (Peery and Henry 2010) However, research by Hébert et al (2003) found it to be less common in northern California. It is also important to recognize that late fledglings are probably the product of replacement eggs (they hatched from an egg that was laid after an earlier nesting attempt failed; Hébert et al. 2003). In many other Alcids, the success of replacement eggs is poor (e.g. common murres, Golightly and Schneider 2016). Data from Hébert et al. (2003) indicated that survival to fledging was low for re-nesting attempts by marbled murrelets (overall 89% of re-nest attempts failed and 92% of re-nest attempts failed in the best reproductive year). Most of these nests failed in the incubation stage. The likelihood of failure in replacement eggs illustrates the problem of extrapolation of a fledge date for determination of the outer extent of the nesting period. Thus, for purposes of avoiding noise impacts to nesting, September 1 could be appropriate as the end of the nesting period in California."

[2] The breeding season is defined by the earliest known nesting and latest known fledging dates. Data shows that nesting begins as early as March 18 and the last fledging occurs in mid-September. This nesting season is similar to that found elsewhere in the southern half of the murrelet's range (McShane et al. 2004) and largely falls within the period given in the Pacific Seabird Group forest survey protocol of March 24 to September 15 (Evans Mack 2003).

Figure 1. Nesting Chronology of Marbled Murrelets by Grounded Fledglings (LMP, 2017)



Noise

When considering mammals or birds that are threatened or endangered, understanding and avoiding disturbing events is important. Marbled murrelets nest high in old growth trees where there are few ground predators and visual cues of a predator approach are limited; consequently, sound is likely the major stimulus causing disturbance at the nest (with the possible exception of corvids which could produce both an auditory and visual stimulus as they approached a nest).

Noise has been described as undesirable sound (Crocker 1998) and an ongoing terrestrial threat to marbled murrelets (McShane et al. 2004). Effective management of this species requires consideration of noise as a source of disturbance during nesting. Further, noise can be considered to be a component of the animal's habitat because noise can compromise communication and reproduction, as well as influence the potential for predation. Noise can cause a decrease in the assessment of habitat quality, especially if noise is persistent in that environment.

Timing of Noise Restrictions

Marbled murrelets are very difficult to observe and species-specific studies of noise impact have been limited, and sometimes impossible to conduct. Clear causal relationships between noise and potential impact or injury (e.g. reduced reproductive success, increased risk of predation) have not been established. Clearly, flushing should be considered harmful. Despite the absence of causal studies on marbled murrelets, events that cause flushing cannot be considered as the only harmful noises.
Formulation of protective strategies for marbled murrelets requires that assessments consider all information about murrelet life history, as well as the responses to disturbance identified in studies of other seabirds.

The following is quoted from the LMP (2017).

> *"The risk of noise impact can be reduced by timing loud noise-producing events near murrelet nests to times when the birds are least vulnerable. This would be especially important during incubation, but also the time of day during chick feeding when fish deliveries might potentially be disrupted. Because the USFWS (2006) was considering spotted owl habitat in the same noise analyses, their considerations for restrictions on noise generation did not fully distinguish all nuances specific to marbled murrelet biology that differ from other species.*
> *Specifically, the timing of how murrelets use the forest is important to providing flexibility to the imposition of restrictions. However, for murrelets the potential impacts from noise generation vary with time of day, phase of the nesting season, and time of year and may not require the same types of restrictions at all times. Thus, it may not be reasonable to apply a single set of restrictions or noise mitigations across all times of day and throughout the nesting season. The following section discusses potential alterations of the present noise restrictions that could be considered to ensure protection to murrelets while also providing regulatory flexibility."*

Marbled Murrelet Response to Noise

> *"Marbled murrelets and their nests are difficult to observe because the nests are so high in the trees and the adults fly in and out for incubation exchanges only during the very early morning hours. To overcome this difficulty, Hébert and Golightly (2006) used radio telemetry and video techniques in RNSP to systematically assess the behavioral and reproductive response of marbled murrelets to noise associated with human trail-use and distances of nests from recreational trails in the park. Here, visual and auditory stimuli could not be separated, but presumably marbled murrelet responses were most* likely associated with noise."

> *"Video was used to record murrelet behavior coincident with human activity on the trails. No murrelets were observed to flush when trails were used by various-sized groups of people. In the same investigation, Hébert and Golightly (2006) also experimentally examined changes in behavior associated with noise generated from operating chainsaws; they examined both the behavioral responses of incubating adults, as well as chicks at the nest. It was apparent that individual murrelets recognized the chainsaw noise as an alteration in their environment. At 65-75 dB measured 25m (82 feet) distant from the source and at the base of the tree, approximately 40-50 m (131-164 feet) from the nest, the noise was 20-35 dB above background in that forest. Murrelets rested less during the time that the saw was running and displayed an increase in behaviors that could be interpreted as vigilance. However, these behavior changes were subtle and appeared to preserve the cryptic manner in which murrelets behave at the nest; see below. Moreover, no murrelets flushed and all sat quiescent in the nest during their chain saw exposure events. Neither chronic nor impulsive noise was tested in this study*."

Daily Variation in Noise Vulnerability

Noise has significant potential to negatively impact murrelet behavior and reproduction when murrelets fly inland to visit nests, make exchanges with their mate during incubation, or feed chicks at nests. During the nesting season, the period from approximately 1 hour before sunrise until 1.5 hours after sunrise should be considered a particularly vulnerable time and moderately loud and/or high-intensity impulsive noise production from anthropogenic sources should be restricted.

Additionally, in California murrelets may fly inland in the late afternoon (1 hour before sunset; see Hébert and Golightly 2006). The late afternoon/evening flights are associated with feeding chicks at the nest (empirically observed evening flights were not detected prior to May 22 but can continue until the end of nesting) and there is a similar need to avoid loud or impulsive noise during this period.

During all daylight hours throughout the nesting season, noises that could cause flushing should be avoided (especially very loud or impulsive noises). Besides very loud or impulsive noises, the difference between the ambient background level and the noise generated by a project is another consideration for the potential to cause harm. For noise generated from a project during daylight hours, Hébert and Golightly (2006) found that noise about 30-35 dB above background did not produce flushing. Consequently, short periods of noise (eg.: such as using a chainsaw or power blower) that is less than 30-35 dB above background (measured from the nest or potential nest tree) would likely have minimal impact and thus be tolerable during most daylight hours (outside the 1.5 hours after sunrise and the hour before sunset). Likewise, noise that is consistent in amplitude, duration, and frequency with the existing sources of noise at the site, even if somewhat louder than usual background, would be unlikely in causing stress to the nest. Conversely, noise that is suddenly injected into the environment may be more likely to cause a response that may be deleterious.

General Sound Assessment and Action Generated Noise Analysis within Huddart County Park, Pescadero Creek County Park, and Big Basin Redwoods State Park

The following excerpts were sourced from a general operational sound assessment conducted by Auten Resource Consulting at various county and state parks properties undergoing restorative vegetation management projects in the Santa Cruz Mountains. Various equipment typically utilized for landscape level, forest health fuels reduction treatments within the region was assessed for sound output levels at various buffer distances.

> *"A general sound level field assessment was conducted over three days in June of 2022 by Auten Resource Consulting at various locations within San Mateo County Parks and California State Parks properties across the Santa Cruz Mountains. The intent of this exercise was to develop a broad dataset containing decibel (dB) reading recorded within different settings and environments for the purpose of observing how those readings compare with corresponding sound levels described in available literature (Estimating Auditory Effects of Auditory and Visual Disturbance of Northern Spotted Owl and Marbled Murrelet in Northwestern California, 2006, 2020 USFWS)."*

Operational Noise

Below, averaged results of the general assessment are compiled based on the type of equipment as well as the specific ranges at which the sound source was measured. The dB values listed are averages sourced from larger datasets for listed each scenario.

> *"Table 9 from the general sound assessment provides a summary of noise levels recorded during active equipment operations. Specific equipment types were assessed for sound at variable ranges to develop a reference scale for machinery that may be used during similar*

vegetation treatment projects. These values are approximate and are averages taken from the broader datasets for each setting/equipment type.

Operations Assessment		
Equipment	**Distance from Equipment (ft)**	**dB Average**
CAT 299D Skid steer mower	165	59.5
	300	52.1
	500	49.0
Link-Belt 145 X4 excavator	120	65.8
	165	59.6
	300	52.0
	500	45.3
Stihl MS 261 chainsaw	165	62.6
	250	57.9
	300	55.9
	500	50.5
John Deere 135G excavator	50	57.7
	100	55.1
	165	46.2
	300	44.2
John Deere 650K XLT Dozer	50	68.7
	165	56.4
Handwork/Felling	50	83.7
	165	73.3
	300	62.7
	500	54.6

Table 9 Operations Assessment Sound Level Summary Results by Equipment Type

Predominantly, operational sound level readings did not vary substantially within each dataset, producing a generally representative average for each equipment type. Figure 8 provides a graph of recorded averages developed from actual readings as well as projected averages along an approximate trendline for each dataset. The plotted points on Figure 8 represent the dB averages developed from physical data while the associated trendline for each equipment type provides general, projected averages at measurement distances where actual data was not available.

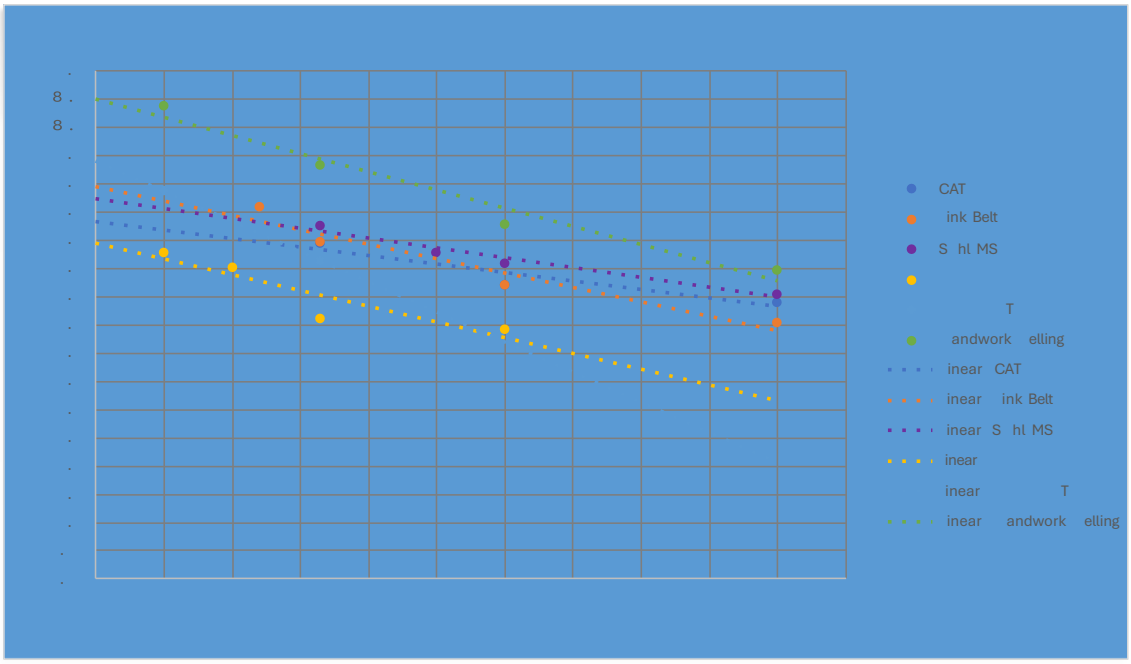


Figure 8 Equipment Sound Level Averages and Projected Averages by Source Type

The maximum recorded sound levels captured during the operational noise assessment were primarily the product of handwork and tree felling along Opal Creek in Big Basin Redwoods State Park. Crews utilized three (3) active chainsaws and hand equipment to fell trees near North Escape Road where noise levels were recorded at various ranges. Generally, this activity produced noise levels approximately 20-35 dB above the other measured equipment, on average.

The lowest general sound levels captured during the operational noise assessment were sourced from the John Deere 135G excavator (JD 135G) equipped with a standard bucket. This machine was primarily conducting earthmoving activities and digging during a culvert replacement project. This project also utilized a John Deere 650K XLT dozer (JD 650K) to mobilize and transport fill material. At the time of the assessment, only 50-foot and 165-foot measurements were taken for the JD 650K due to opportunity constraints. Sound measurements for this equipment type were recorded from the road with very minimal to no obstruction between the meter and the machinery.

The Link-Belt 145 X4 excavator, which is similar in operating weight and net power output to the JD 135G, produced moderate noise levels when compared to the other types of measured equipment. The Link-Belt was fitted with a masticating/brush mower head which was used for general vegetation treatment and small to mid-size tree removal, generally trees primarily along roads and trails. Generally, this unit when equipped with a masticating head produces noise approximately 10 dB above what the JD 135G produces, depending on the factors and use dynamics. A Caterpillar 299D skid steer dozer was onsite with the Link-Belt 145 and was fitted with a drum-style brush mower head primarily for understory fuels reduction work off of roads. Additional uses for this equipment type are providing access into treatment units,

reducing woody debris piles, and higher precision treatment mobility around sensitive resources or tightly spaced areas.

The chart in Figure 9 provides an approximate scalar reference for sound sources and their associated noise levels on active project sites within the region. Exact values may be subject to factors not included or evaluated in this general study. For the purpose of this assessment, average dB levels and projections based on those averages were used to develop the results described above.

The results of this sound analysis indicate that the mechanized equipment described in this report, which is typical for landscape scale vegetation treatment projects in the Santa Cruz Mountains (forest restoration treatments utilizing handwork crews and mastication equipment), operates at Low – Moderate sound levels. Handwork and felling conducted by a fully outfitted crew produced the only sound levels above 70 dB when measured at 50 feet. Additionally, it is expected that sound levels will decrease at greater distances from the source. Mechanized equipment noise measured at 165 feet produced sound levels between 45 – 65 dB, while the same equipment assessed at 300 feet produced sound levels between 43 – 57 dB."

Information and data gathered from this assessment provides a general reference for sound outputs produced by equipment types likely used to accomplish forest restoration and resiliency treatments in proximity to known or suitable marbled murrelet habitat. Variabilities in equipment type, decibel levels, and overall project generated noise are determined on a site-specific basis for these project types.

Summary

The old growth forests of the Santa Cruz Mountains were protected because people loved and wanted to preserve their charismatic large trees. At that time, no one knew that they were also protecting the nesting place of an obscure seabird. The threat they focused on was old growth logging, today, the threat to these trees and murrelets is extreme fire behavior and other effects of climate change, similar to what occurred during the 2020 CZU Lightning Complex Fire. Without proactive forest restoration treatments, extreme fire behavior and climate change will continue to be a threat to the survival of both the old trees and the seabird. This habitat loss from future fires is a possibility we cannot ignore, and inaction is not an option. It's not a matter of if murrelet habitat will burn but *when* and *how intensely*?

There is still much unknown about exactly how and when marbled murrelets use their habitat. However, the survey results summarized point to a significant decrease in forest habitat use in early to mid-August. The localized marbled murrelet behavioral data outlined in this report are supportive of wider operational windows; April 1 – August 5 are dates that better reflect known time of use based on AV and ARU surveys, except for the marbled murrelet important areas within Portola State Park and Pescadero Creek County Park or Gazos Mountain Camp where September 1st is appropriate. Based on this timing of use, timing of forest management activities can be adjusted to occur based on their proximity to existing old growth habitat. In addition, the data presented in the Noise section, based on the USFWS 2006, 2020 auditory effects document, indicate that certain activities and equipment can likely operate closer than initially assumed.

Recommendations[3]

The following recommended Best Management Practices consider the recorded localized marbled murrelet behaviors analyzed in this report, the scale and impact of the CZU Fire to marbled murrelet habitat, and the urgency to minimize the threat of further loss of murrelet habitat as a result of extreme wildfires and climate change through proactive forest management:

1. **Operational Window:** High decibel work in proximity or within areas identified as murrelet habitat, occupied or important habitat areas in the Santa Cruz Mountains may begin on August 5th and continue to March 24th, except for the following conditions:
    a. At sites that are known as prime unburned (pre-CZU Fire) habitat for marbled murrelets, such as marbled murrelet important areas within Pescadero Creek County Park and Portola State Park, or marbled murrelet important areas within Gazos Mountain Camp in Butano State Park, avoid working until August 15th and September 1st, respectively, unless new AV or ARU data suggests different dates when murrelets nest in these areas.
    b. High decibel work may occur year around in areas of the CZU Fire that burned at moderate-high and high severities (https://sig-gis.com/czu-lightning-complex-map/) within the CZU Fire where murrelet habitat was significantly compromised or destroyed.

2. **Working Hours**: Do not work during the dawn and dusk period in areas identified as murrelet habitat, occupied or important habitat areas that experienced low or moderate burn severity. Work from 1.5 hours after sunrise to 1 hour before sunset between March 24th – August 5th, or March 24th – August 15th in marbled murrelet important areas within Pescadero Creek County Park and Portola Redwoods State Park, and March 24th – September 1st within marbled murrelet important areas in Gazos Mountain Camp.

3. **Noise Restrictions:** Noise restrictions should be in place that address any chronic noise production or new noise that is 30-35 dB above background. These noises should be carefully evaluated, and minimized to the extent possible.
    a. **Habitat Buffer:** Sound analysis work and data indicates that in areas of low to moderate fire severity, where areas identified as murrelet habitat, occupied or important habitat areas in the Santa Cruz Mountains still exists, buffers can be reduced to 330 feet to allow larger handwork crews and mastication equipment to conduct forest restoration and resiliency treatments greater than normal routine maintenance actions and park use, from March 24th to August 5th, or March 24th – August 15th within marbled murrelet important areas in Pescadero Creek County Park and Portola State Park and March 24th – September 1st within marbled murrelet important areas in Gazos Mountain Camp.

- [3] Recommendations are locally applicable to Santa Cruz District State Parks and San Mateo County Park lands including Big Basin Redwoods State Park, Portola Redwoods State Park, Butano State Park, Pescadero Creek County Park, Memorial County Park and Sam McDonald County Park.

4. **Strategic Planning:** Time forestry work to occur as far from murrelet habitat in the July timeframe and work towards murrelet habitat.

5. **Continued Monitoring:** AV and ARU monitoring will continue in areas where these recommendations are being followed to monitor changes in murrelet behavior supporting adaptive management strategies as needed to protect the species. Survey data will be shared with Agencies as it is available post season to adjust work windows based on new information.

Lifespan

This document is intended to serve as a guidance document for the next 10 years and if still of use will be updated in 2033.

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