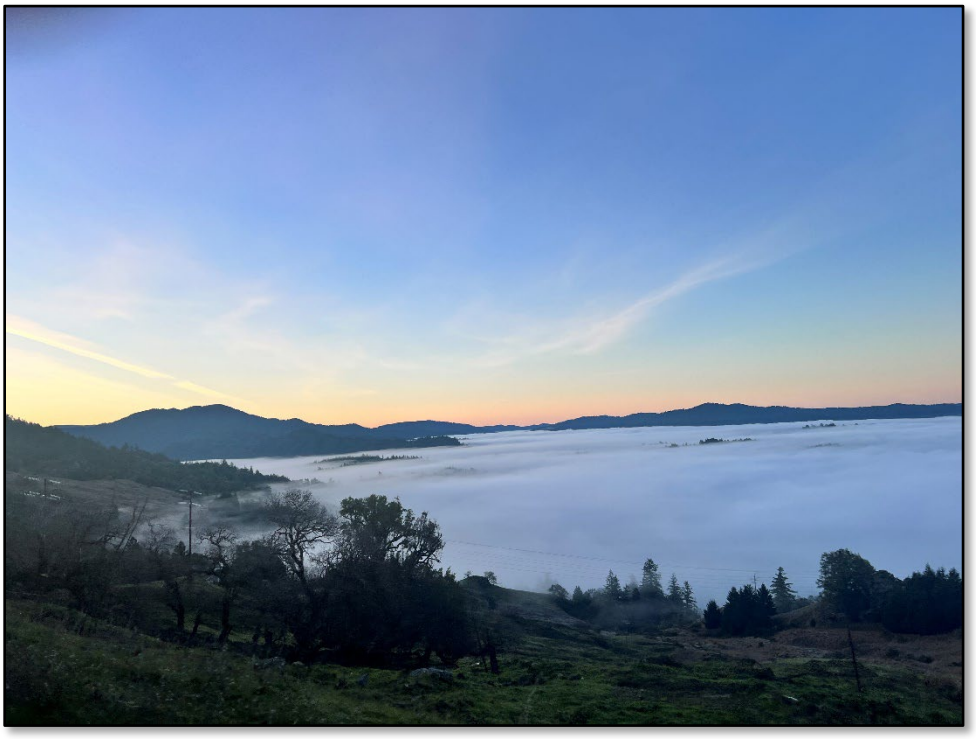
Mail Ridge Forest Health and Wildfire Resilience Project
Project-Specific Analysis

An Addendum to the CALVTP PEIR
July 2025
CALVTP ID # 2025-01



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Mail Ridge Forest Health and Wildfire Resilience Project
Project-Specific Analysis

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LIST OF ABBREVIATIONS

AB - Assembly Bill

ACOE - Army Corps of Engineers

ATV - All-terrain Vehicle

Board - California Board of Forestry and Fire Protection

CAAQS - California Ambient Air Quality Standards

CAL FIRE - California Department of Forestry and Fire Protection

CalVTP - California Vegetation Treatment Program

CDFW - California Department of Fish and Wildlife

CE - Candidate Endangered

CEQA - California Environmental Quality Act

CESA - California Endangered Species Act

CNDDB - California Natural Diversity Database

CNPS - California Native Plant Society

CO2e - carbon dioxide equivalent

CRHR - California Register of Historical Resources

CRLF - California red-legged frog

CRPR - California Rare Plant Rank

CT - Candidate Threatened

CTL - Cut to Length

CVTS - Coastal Vegetation Treatment Standards

CWHR- California Wildlife Habitat Relationships

DBH - Diameter at Breast Height

DPS - Distinct Population Segment

DTSC - Department of Toxic Substances Control

EPA - US Environmental Protection Agency

ESA - Federal Endangered Species Act

ESU - Evolutionarily Significant Unit

ESHA - Environmentally Sensitive Habitat Area

FHWA - Federal Highway Administration

FRAP - CAL FIRE Fire and Resource Assessment Program

GHG - Greenhouse Gas

GIS - Geographic Information Systems

HCP - Habitat Conservation Plan

IAP - Incident Action Plan

IPC - Invasive Plant Council

MIST - Minimum Impact Suppression Tactics

MMRP - Mitigation Monitoring and Reporting Program

NAAQS - National Ambient Air Quality Standards

NAHC - Native American Heritage Commission

NCCP - Natural Community Conservation Plan

NCUAQMD - North Coast Unified Air Quality Management District

NRHP - National Register of Historic Places

NWIC - Northwest Information Center

PEIR - Program Environmental Impact Report

PRC - Public Resources Code

PSA - Project-Specific Analysis

PTEIR - Programmatic Timber Environmental Impact Report

RCNM - Roadway Construction Noise Model

RWQCB - Regional Water Quality Control Board

HCRCD - Humboldt County Resource Conservation District

SOD - Sudden Oak Death

SPR - Standard Project Requirement

SRA - State Responsibility Area

SSC - Species of Special Concern

THPO - Tribal Historic Preservation Officer

USFWS - U.S. Fish and Wildlife Service

USGS - U.S. Geological Survey

UTV - Utility Task Vehicle

WDR - Waste Discharge Requirements

VMT - vehicle miles traveled

WLPZ - Watercourse and Lake Protection Zone

1. INTRODUCTION

Background

The California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (PEIR) adopted by the California Board of Forestry and Fire Protection (Board) evaluates the potential environmental effects of implementing qualifying vegetation treatments that reduce the risk of wildfire throughout the State Responsibility Area in California. It was designed for use by State, special district, and local agencies to accelerate vegetation treatment project approvals where it finds that those projects are within the scope of the Statewide Project addressed in the PEIR. This finding must be supported by a Project Specific Analysis (PSA).

The Humboldt County Resource Conservation District (HCRCD) was awarded a California Department of Forestry and Fire Protection (CAL FIRE) Fire Prevention Grant along with a State Coastal Conservancy Grant for developing a PSA for the Mail Ridge Forest Health and Wildfire Resilience Project. This project covers a landscape scale area that runs for 32 miles along Mail Ridge in southern Humboldt County and a small portion of Trinity County; this PSA specifically addresses activities in this project area.

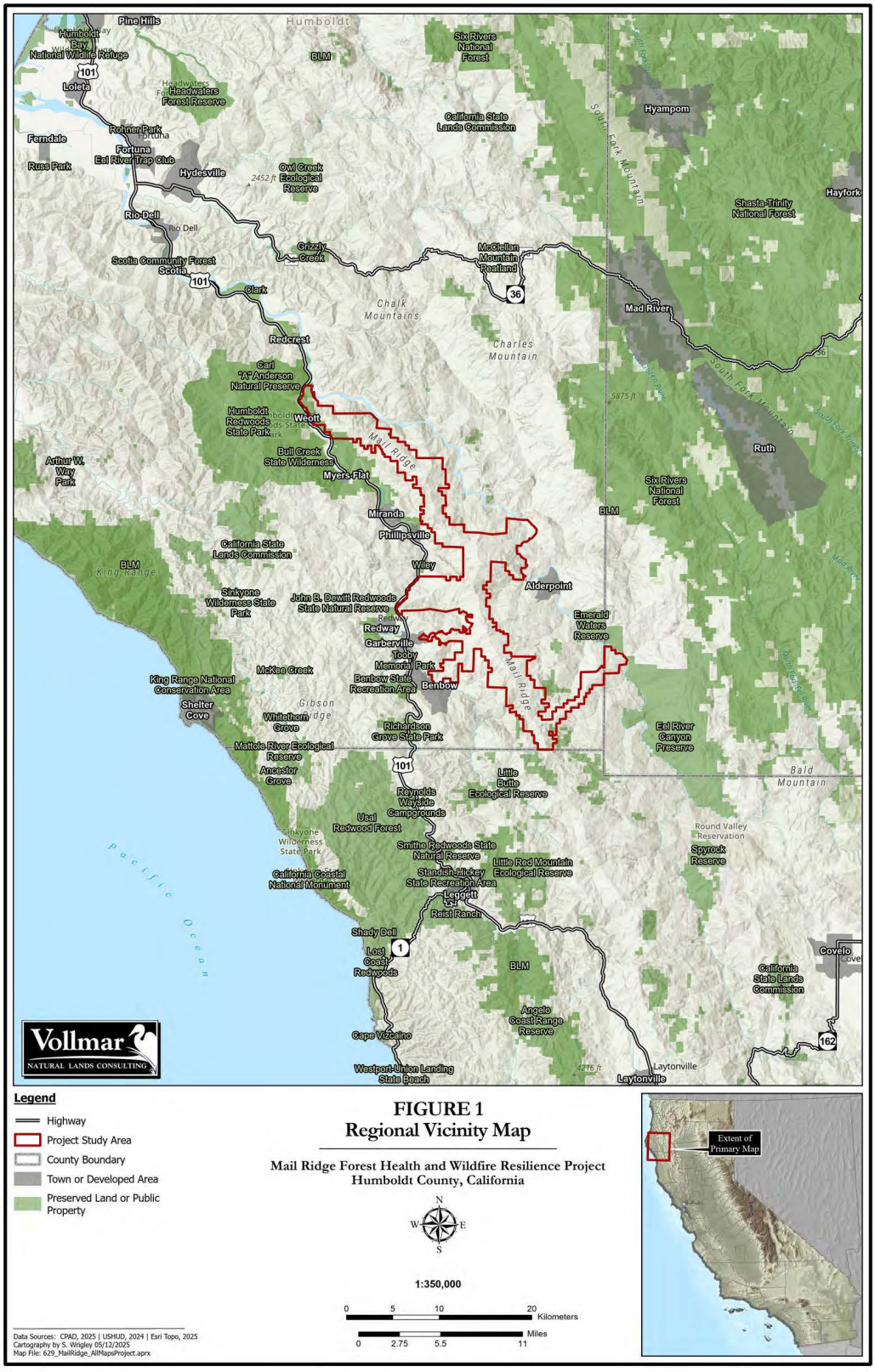
The HCRCD and the Humboldt County Fire Safe Council (HCFSC) propose to treat approximately 20,000 acres within an approximately 50,000-acre area of Mail Ridge (Figure 1) over the course of 10 years. The majority of the project area is within the "treatable landscape" as described in the CalVTP PEIR, though some portions of the project area include grasslands between treatable landscapes that are technically outside of the mapped landscape.

This PSA describes the proposed treatment project and assesses the potential impacts of that project along with the applicability and effectiveness of Standard Project Requirements (SPRs) and mitigation measures contained in the PEIR in reducing the potential project-specific impacts.

Project Need and Objectives

Forested landscapes across California, including those in the project area, have experienced over one hundred years of fire suppression and a climate that has become warmer and drier. These factors have contributed to substantial changes in regional ecosystems and a decline in overall forest health. Compounding these effects is a suite of related ecological feedbacks, including conifer species displacing hardwoods and other fire-resilient native plant species, reducing biodiversity and affecting the suitability of these habitats for rare and special-status wildlife and plants. In addition, altered fire regimes and increased fuel loads are driving larger and more high-intensity wildfires. As a result, these landscapes have undergone unsustainable structural and compositional changes at the ecosystem level that require environmentally sensitive landscape-level treatments to provide resistance and resilience to the effects of changing climatic and ecological conditions. The Mail Ridge Forest Health and Wildfire Resilience project represents an opportunity to fire-harden a 32-mile-long north-south running ridge and protect some of California's largest and least burned redwood and Douglas-fir forests.

Figure 1. Project Location



Within the project area, treatments are designed by the HCRCD to meet the following objectives:

- Establish Mail Ridge as an effective line of wildfire defense between interior and coastal forests in Humboldt County;
- Establish healthy, resilient, fire-adapted ecosystems to protect and conserve natural resources;
- Protect upper watersheds where important regional water supplies originate; and
- Promote the long-term storage of carbon and reduce the severity of catastrophic wildfire, thereby increasing community and forest ecosystem protection.

CEQA Responsible Agency and Proposed Project

The HCRCD is the California Environmental Quality Act (CEQA) Responsible Agency for this project. The HCRCD is seeking CEQA compliance for the proposed project as a later activity covered by the CalVTP PEIR, using its PSA checklist. The proposed treatment type (i.e., Wildland Urban Interface [WUI] fuel reduction and ecological restoration) and the treatment activities (i.e., burning, manual, and mechanical treatments) are consistent with those evaluated in the CalVTP PEIR. In addition, the treatment areas are mainly within the "treatable landscape" as identified in the CalVTP PEIR, though the larger study area includes some areas that are outside (though adjacent to) treatable landscape.

Document Purpose

This document serves as both a PSA and CEQA Addendum to the CalVTP PEIR for HCRCD review and approval for the proposed treatments. The purpose of this PSA is to evaluate whether the proposed treatments have been adequately considered by the CalVTP PEIR. If a proposed vegetation treatment project is adequately covered by the evaluation of environmental effects in the PEIR, it may be approved by a lead or responsible agency using a finding that the project is within the scope of the PEIR for its CEQA compliance, consistent with CEQA Guidelines Section 15168(c)(2).

Criteria for determining whether a treatment project is within the scope of the CalVTP PEIR include whether it is within the CalVTP treatable landscape (i.e., the geographic extent of analysis covered in the PEIR), or includes changed circumstances from those described in the PEIR. If a proposed vegetation treatment project is within the "treatable landscape" identified in the PEIR and does not include changed circumstances or unusual conditions not anticipated in the PEIR, and its impacts are addressed by the evaluation of environmental effects in the PEIR, it may be approved by the lead Agency using a finding that the project is within the scope of the PEIR for its CEQA compliance, consistent with CEQA Guidelines Section 15168(C)(2). The project-specific mitigation monitoring and reporting program, which identifies the CalVTP standard project requirements ('SPR's) and mitigation measures applicable to the proposed project, is provided in Attachment A.

In this case, there are no changed circumstances, but the proposed project includes areas outside of the CalVTP treatable landscape, which constitutes a revision or change in the project considered in the CalVTP PEIR. The PSA checklist (refer to Section 4, "Project-Specific Analysis") includes the criteria to support an Addendum to the CalVTP PEIR for the inclusion of these changes. The checklist evaluates each resource in terms of whether the later treatment project, including the "changed condition" of additional geographic

area, would result in significant impacts that would be substantially more severe than those covered in the PEIR and/or would result in any new impacts that were not covered in the PEIR. In this case, the PSA concludes that no new or substantially increased impacts would occur from the addition of the area to the CalVTP "treatable area".

This PSA/Addendum and attachments together support the finding that the proposed project is within the scope of the CalVTP PEIR. Each resource topic below includes a discussion of impacts related to that resource area followed by discussions of SPRs and mitigation measures that are applicable for avoiding, minimizing, and mitigating impacts for that resource area. Supplemental analysis and information supporting the impact discussions can be found in the corresponding attachments. A finding that a project is within the scope of the PEIR requires the following components:

- Description of the impact of the proposed treatment project;
- Summary of the impact in the CalVTP PEIR;
- Evidence the project impact is addressed by the PEIR;
- CalVTP SPRs and Mitigation Measures applicable to the proposed project; and
- Conclusion regarding consistency with the PEIR.

This PSA includes a mitigation monitoring and reporting program (MMRP) in accordance with CEQA and the State CEQA Guidelines (Public Resources Code Section 21081.6 and State CEQA Guidelines Sections 15091[d] and 15097). A MMRP is required for approval of the proposed project because this PSA identifies potential significant adverse impacts and all feasible mitigation measures have been adopted. SPRs, environmental protection features included as part of the project description, have been incorporated into this project 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. The numbering of SPRs and mitigation measures follows the numbering used in the PEIR. The MMRP requirements covered in this PSA include: 1) SPRs and Mitigation Measures – Brief discussions indicating whether an SPR or mitigation measure is applicable to this project are included under each resource section below; 2) Implementing Entity and Timing of Implementation – This identifies the agency responsible for implementing the measure and time frame in which the SPR or mitigation measure will be implemented for each applicable SPR/mitigation measure; and 3) Verifying/Monitoring Entity – This column identifies the party responsible for verifying and monitoring implementation of the SPR or mitigation measure.

The MMRP will be adopted by the HCRCD upon its approval of the proposed project. As this PSA is used for CEQA compliance of future discretionary approvals by other state and local agencies related to treatments in the project area, those agencies will adopt separate MMRPs that specify the SPRs and mitigation measures relevant to their approval and within their jurisdiction. The HCRCD will document and describe the compliance of the project treatment work with the required SPRs and mitigation measures either by adapting a project-specific MMRP table or preparing a separate post-project implementation report pursuant to the requirements of SPR AD-7.

2. PROJECT DESCRIPTION

PROJECT OVERVIEW

Southern Humboldt County is a rugged and remote region of California renowned for its lush forest growth, ancient redwoods, abundant salmonid runs, and wild rivers. This region lies between the state's dry interior and densely vegetated coastal environments. With the dramatic increase in catastrophic wildfire driven by hot, dry interior conditions, this area has become an increasingly important boundary to protect the region's vulnerable communities and ecology.

Across the region, forest management practices have resulted in the suppression of beneficial fire, commonly practiced by Indigenous Peoples prior to European settlement. The absence of regular low-intensity fire, combined with other forest practices, has resulted in overly dense, early successional timber stands, conifer encroachment into oak woodlands, and the presence of invasive plant species. These conditions increase the area's vulnerability to catastrophic wildfire, making firefighting efforts less effective and more challenging. This project aims to improve ecological function, wildfire resilience, and capacity for fire management along this critical boundary.

Mail Ridge is a ridgeline in southern Humboldt, with a small adjacent side ridges running into Trinity County. Its strategic importance lies in its north-south alignment, ecological value, contiguous length, and location northeast of Highway 101 population centers. The ridge is a natural defensive barrier that allows a strategic defensive break against catastrophic, northeasterly wind-driven wildfire events such as the August Complex Fire in 2020.

The Project lies along 32 miles of the crest of Mail Ridge, from the Mendocino County border to the confluence of the Main Stem and South Fork Eel River, in unincorporated Humboldt and Trinity counties. It includes private and industrial forestlands in the Eel and South Fork Eel River Watersheds, rangelands, and wildland-urban interface. This Project was initially envisioned by the Humboldt County Resource Conservation District (HCRCD), Southern Humboldt Fire Safe Council (SHFSC), California Department of Forestry and Fire Protection (CAL FIRE) Humboldt-Del Norte Unit, and local volunteer fire departments (VFD), including Briceland VFD, Fruitland Ridge VFD, Palo Verde VFD, and Alderpoint VFD following the August Complex Fire in 2020, which posed a significant threat to the region.

The approximately 50,000-acre Study Area is defined by the geographic ridgelines, which include Mail Ridge, Walker Ridge, Tuttle Buttes Ridge, and the ridges along Tooby Ranch Road and Alderpoint Road. The Project's anchor is Mail Ridge and the various roads closest to the ridgeline from north of the Mendocino County border to the confluence of the Main Stem and South Fork Eel Rivers. The Study Area extends ¼ mile on each side of the Ridge/Rd area and includes all parcels that touch that ¼ mile buffer. Sub-ridges are smaller ridges that connect to Mail Ridge, several of which are included for treatment. Each sub-ridge treatment area is defined by 600' on either side of the ridgeline and includes all parcels that touch that buffer.

The Study Area was selected through GIS, LiDar, topographic analysis, and on-the-ground assessments by a collaborative process involving HCRCD, SHFSC, Briceland VFD, industrial timber companies, landowners, California State Parks, and the Southern Humboldt Fire Chiefs Association members.

The unincorporated towns to the west of the Study Area are Benbow, Garberville, Redway, Phillipsville, Miranda, Myers Flat, and Weott. The unincorporated towns to the east of the Study Area are Alderpoint, Steelhead, and Fort Seward. Unincorporated towns within the study area are Fruitland Ridge, New Harris, and Harris.

The Project area is identified for priority treatment in the Humboldt County Community Wildfire Protection Plan (CWPP) WebGIS Database. It includes acreage within CAL FIRE designated Very High Severity Fire Hazard Zone.

Situated on the ancestral homelands of the Wailaki People, the Project has prioritized active collaboration with tribal organizations. The Project integrates Traditional Ecological Knowledge into landscape management. Once implemented, the suite of fuels reduction and prescribed (Rx) fire treatments will enhance forest health through thinning and low-intensity burning, improve carbon sequestration and storage, and reduce the risk of catastrophic wildfires. The Project will also reduce the spread of invasive species, including barbed goatgrass (*Aegilops triuncialis*), a highly invasive grass recently discovered in Humboldt County.

The Project will treat a maximum of 2,000 acres annually over 10 years for a cumulative 20,000-acre treated footprint within the approximately 50,000-acre Study Area (**Figure 2**). The Study Area footprint is much larger than the Project Area to provide flexibility in Project implementation over the 10-year lifespan of the project. All treated acres will be within the Study Area footprint. Project treatment types include Wildland Urban Interface (WUI), Shaded Fuel Break, and Ecological Restoration (see **Figure 2 and Table 1**). Some acres may receive multiple treatment types, resulting in "treated areas' exceeding the total project acreage. Treatments will include up to 18,091 acres of mechanical treatments, up to 20,000 acres (across 33,400 acres) of manual treatments, up to 8,350 acres of prescribed fire (pile burning), up to 20,000 acres (across 49,747 acres) of prescribed fire (broadcast burning), and up to 5,000 acres of prescribed herbivory (primarily cattle grazing).

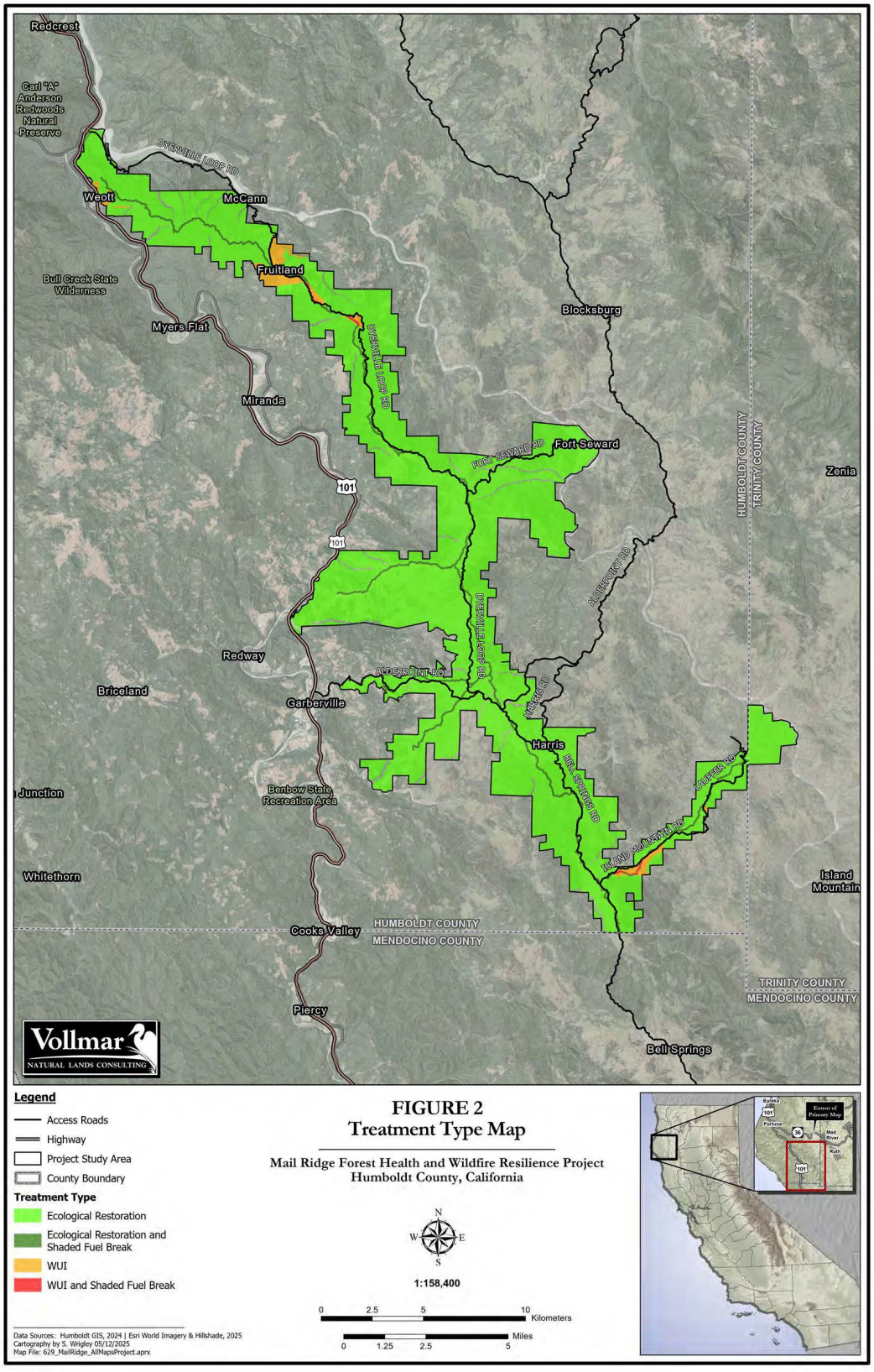
The Project will utilize all three treatment types evaluated in the California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (PEIR). These are Wildland Urban Interface (WUI), Shaded Fuel Break, and Ecological Restoration. Treatment type definitions are described below. Acreage of treatment types throughout the Study Area is included below in **Table 1** and the potential distribution across the Study Area is shown on **Figure 2.** The Fuel Break treatment type overlaps with Ecological Restoration and WUI treatments, so the acreage in **Table 1** exceeds the Study Area acreage.

Table 1. Mail Ridge Wildfire Resilience Project Treatment Types and Acres

CalVTP Treatment Types	Acres*
Ecological Restoration	20,000
Wildland Urban Interface	1,155
Shaded Fuel Break	2,092

*Note: Cumulative treatment acres are greater than the 20,000 treatment acres due to overlap of treatment types.

Figure 2. **Mail Ridge Wildfire Resilience Project Treatment Types**



PROJECT SETTING

The Study Area is characterized by three coarse-level vegetation types – Forest, Shrub, and Grasslands. Forest Vegetation Communities within the Study Area consist of Redwood and North Coast Coniferous Forest habitat types. Tree species present within the Study Area include coast redwood (*Sequoia sempervirens*), tanoak (*Notholithocarpus densiflorus*), Douglas-fir (*Pseudotsuga menziesii*), Pacific madrone (*Arbutus menziesii*), California bay laurel (*Umbellularia californica*), canyon live oak (*Quercus chrysolepis*), grand fir (*Abies grandis*), California black oak (*Quercus kelloggii*), and Oregon white oak (*Quercus garryana*).

Shrub and herbaceous vegetation communities include poison oak (*Toxicodendron diversilobum),* evergreen huckleberry (*Vaccinium ovatum*), blue blossom (*Ceanothus thyrsiflorus*), whitethorn (*Ceanothus incanus*), red-flowering currant (*Ribes sanguineum*), western sword fern (*Polystichum munitum),* and California blackberry (*Rubus ursinus*). Forested areas along the edges of grasslands typically consist of young, dense stands of Douglas-fir that have invaded into grassland areas.

Grassland vegetation communities within the Study Area are mainly composed of non-native grass species, with the dominants including Sitka brome (*Bromus sitchensis*), wild oats (*Avena barbata*), rattlesnake grass (*Briza minor*), and soft brome (*Bromus hordeaceus*), and can include dense patches of coyote brush (*Baccharis pilularis*).

Table 2. Mail Ridge Wildfire Resilience Project Vegetation Communities within the Study Area

Vegetation Communities	Approximate Acres
Forest	33,420
Shrub	80
Grasslands	16,500

PROPOSED CALVTP TREATMENT TYPES

Wildland Urban Interface

The proposed Study Area includes approximately 1,155 acres of potential WUI treatment type. All treatment activities will occur in the WUI areas described in Section 4 below. Prescribed fire broadcast burning could occur on all treated WUI, forest, shrub, and grasslands with a minimum 100' buffer around structures. Prescribed herbivory could be applied throughout WUI grasslands where landowners are willing to graze and have grazing infrastructure.

Shaded Fuel Break

The proposed Study Area includes approximately 2,092 acres of potential Shaded Fuel Break treatment type. There will be no unshaded fuel breaks in the Project. Treatments for Shaded Fuel Break include all treatment

activities described in Section 4. Prescribed herbivory treatments will be applied to grasslands where landowners already graze and have grazing infrastructure in the shaded fuel break.

Ecological Restoration

The proposed Study Area includes approximately 48,593 acres of potential Ecological Restoration treatment area (though only up to 20,000 acres will actually be treated). This treatment type occurs throughout the entire Study Area, excluding WUI areas. All treatment activities described above will occur in the Ecological Restoration treatment type. In oak woodlands, the focus will be on removing Douglas-fir trees that are encroaching upon oak woodlands. A component of the proposed ecological restoration treatment type is the removal of invasive plants. Manual and mechanical invasive plant removal from grassland and forest areas will be conducted in regions impacted by invasive plants. This treatment has the objective of restoring historic grassland structure and species composition. Invasive plant removal will target species such as Scotch broom (*Cytisus scoparius*), French broom (*Genista monspessulana*), Pampas grass (*Cortaderia selloana*), and non-native grasses where populations exist within treatment areas.

Invasive plant removal will be completed using tools such as a weed wrench or excavator thumb to remove plants from the ground, and vegetation will be piled or lopped and scattered. Manual treatments will occur year-round as weather and environmental conditions allow. Herbicide treatments may also be used on target populations.

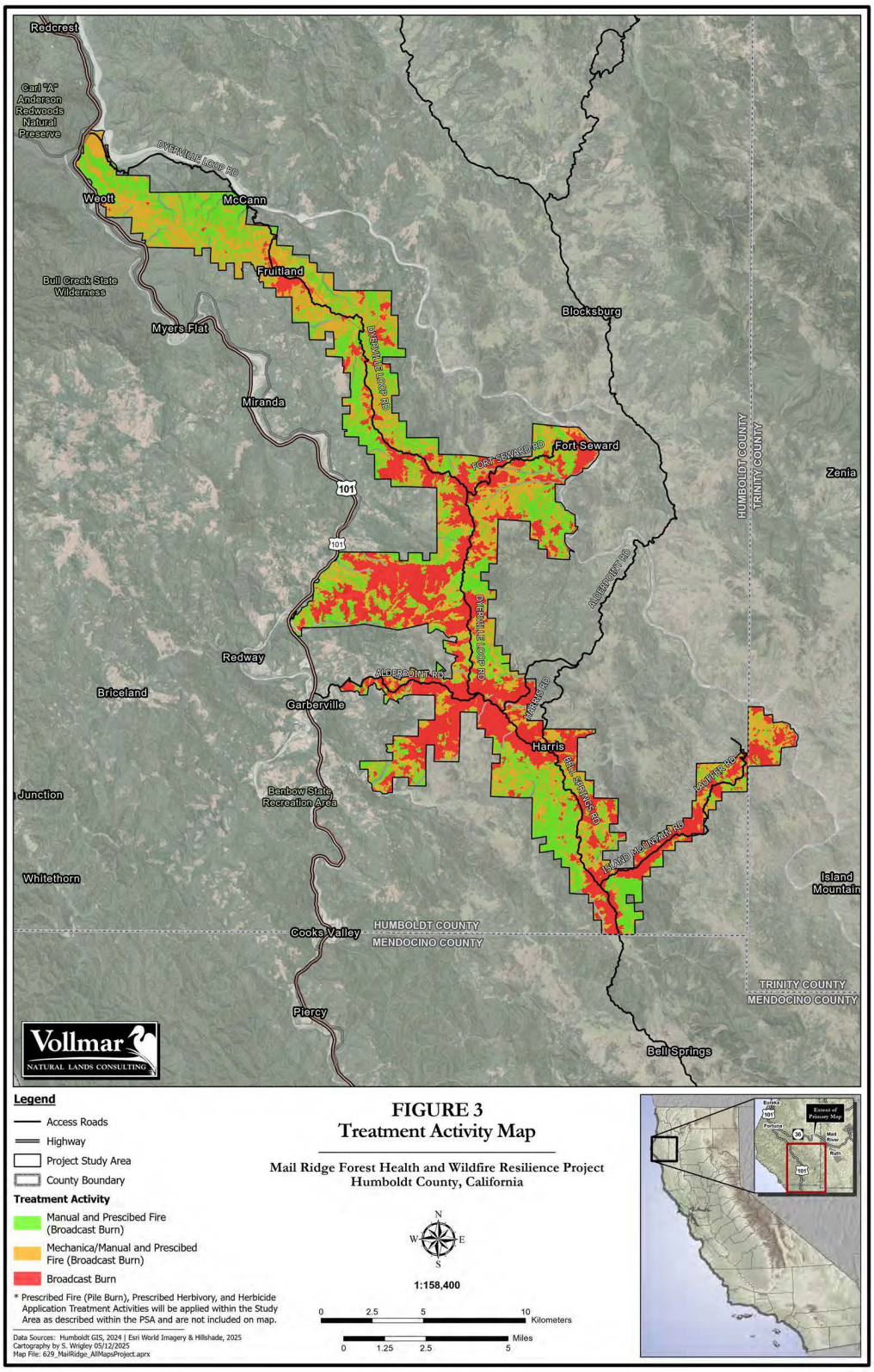
TREATMENT ACTIVITIES

The six primary project treatment activities include mechanical treatment, manual treatment, prescribed fire (pile burn), prescribed fire (broadcast burn), prescribed herbivory, and herbicide use. Treatment activities are described below, and the total potential acreage of suitability per treatment activity within the larger Study Area is included in **Table 3** and shown on **Figure 3**. However, only 20,000 acres of the Study Area will be treated as part of the project, though areas could receive multiple treatment activities. Up to three work crews may be working on different properties in a treatment area simultaneously. Work crews may be up to 20 people for prescribed burns, but would typically be 4-10 people for most other activities.

Mechanical Treatment

Mechanical forest thinning treatments will be conducted within forested areas on slopes less than 40%, in locations accessible to heavy equipment (**Figure 3**). The treatments may involve various equipment types, including excavator-mounted forestry mulchers/masticators, cut-to-length harvesters, and tracked mulchers, depending on site conditions, tree size class, and the type of equipment available at the time of implementation. Excavator-mounted forestry mulchers and tracked mulchers will masticate whole trees up to 18 inches in diameter, leaving in place a chip bed with an average spacing of up to 20-30 feet between trees. Trees under 18 inches in diameter that are retained will achieve an average spacing of 15-20 feet when feasible. Special attention will be given to retaining individual trees of species that are under-represented within the stand and the project area, as well as trees that provide wildlife habitat. Dense patches of shrubs will be masticated in areas where they would act as ladder fuels and increase wildfire; diverse patches of shrubs will be left in place to increase native plant and vegetative structural diversity in the understory.

Figure 3. Mail Ridge Wildfire Resilience Project Treatment Activities



Felled trees will be bucked into sections no longer than 8 feet, using a lop-and-scatter method, ensuring that all portions of the felled tree are in contact with the ground. Slash that has been lopped and scattered will be no higher than 18 inches off the ground, and slash will not be placed near the base of remaining trees. When feasible, excavators and other small, tracked equipment can be used to generate piles for further treatment.

Mechanical treatments will occur year-round as weather and environmental conditions permit. Mechanical treatments could be followed by manual treatments, where pole saws will be used to prune limbs up to 15 feet high, and chainsaws will be employed to cut any slash left by equipment that has not met the specifications.

Table 3. Mail Ridge Wildfire Resilience Project Potential Treatment Activities within the Study Area

Treatment Activity	Study Area Acres[1]	Max Potential Treatment Acres	Method Of Application
Mechanical Treatment	18,091	18,901	Mastication, chipping, brush raking, tilling, mowing, roller chopping, skidding, and piling, often combined with manual treatment and pile burning.
Manual Treatment	33,400	20,000	Hand thin, prune, and cut. Pile, lop, and scatter.
Prescribed Fire (Broadcast)	49,747	20,000	Burn understory within timber or oak woodlands and grasslands with perimeter control line.
Prescribed Fire (Pile Burn)	8,350	8,350	Place removed fuels in piles on site and burn fuel.
Prescribed Herbivory	5,000	5,000	Grazing or browsing by cows, goats, or sheep.
Herbicide Application	20	20	Targeted herbicide use on invasive plant species and vegetation resprout.

[1] The total acreage in this table exceeds the total Study Area acreage due to multiple treatments being applied across areas.

Manual Treatment

Manual treatments will be completed using a chainsaw to fell trees up to 18 inches in diameter, leaving an average spacing of residual trees up to 20-30 feet apart. Dense patches of shrubs that act as ladder fuels and pose a wildfire risk will be removed; diverse patches of shrubs will be retained to enhance native plant and vegetative structural diversity in the understory. Trees under 18 inches in diameter that are retained will achieve an average spacing of 15-20 feet when feasible. Special attention will be given to retaining individual trees of species that are under-represented within the stand and the project area, as well as trees that

provide wildlife habitat. Felled trees will be bucked into sections no longer than 8 feet in length, using a lop-and-scatter method so that all portions of the felled tree are touching the ground.

Slash that has been lopped and scattered will be no higher than 18 inches off the ground, and slash will not be placed near the base of residual trees. When feasible, felled trees and slash will be piled for later burning. Manual thinning treatments will occur year-round as weather and environmental conditions permit.

Prescribed Fire (Pile Burn)

In areas where pile burning is to occur, biomass from mechanical and manual treatments will be piled using equipment such as a skid steer, tractor, bulldozer, excavator, or hand crew. A qualified burn boss will develop a burn plan and oversee all burning activities. To reduce emissions and sequester carbon, a curtain burner and biochar kiln may be used interchangeably for up to 20% of areas treated with pile burning.

Pile burning will take place near manual and mechanical treatment areas. Piles will be constructed where there is little to no live overstory and in open grasslands outside of WLPZ areas. Piles are to be no more than 20' in width, length, and diameter as per SPR GEO-6. No more than 30 piles per acre will be constructed and burned. Pile burning would not occur in areas with abundant native plants or sensitive plant species. Pile burn treatments will occur when permitted by Cal Fire and Air Quality and as weather and environmental conditions allow.

Prescribed Fire (Broadcast Burn)

Broadcast burning treatments will occur in forest, shrub, and grassland areas. Control lines will be established along the perimeter of all burn units. Control lines involve installing either an 8' average mowed line, a 6' average dozer line cut down to mineral soil, hand line or a 'wet line' created by spraying water along an area to stop the burn. Fire crews will establish a hose-lay to support maintaining containment lines along the flanks of the prescribed burn unit. Mowed line will be the preferred treatment to minimize impact. These control lines may also be used within the prescribed burn unit to prevent damage to oak woodlands and other ecological and cultural assets. Some control lines may require rehabilitation of necessary stream crossings along containment lines to allow for prescribed fire resource access. Rehabilitation of stream crossings will be decided unit by unit based on funds, need for access, and landowner interest. In most cases, this activity may require additional permitting.

A qualified burn boss will develop a burn plan and oversee all burning activities. Biomass from lop and scatter activities will be cured until suitable to burn. Burn areas will typically occur between a ridgeline and an access road at the lower extent of a burn unit. Resources staffed by qualified individuals, including heavy equipment and water tenders from agencies and local fire departments, will be on-site during all burn activities. Sensitive habitat and culturally sensitive areas within the burn unit will be delineated prior to burning activities. Broadcast burn treatments will occur when Cal Fire and Air Quality rules permit, year-round but likely between October and June, as weather and environmental conditions allow.

Prescribed Herbivory

Prescribed herbivory as a treatment activity will be implemented in all treatment types where grassland and shrub areas occur. Up to 5,000 acres of prescribed grazing treatment activity may occur. A grazing plan will be made to support grazing targets supporting fire protection. Focused cattle grazing may be used when

willing landowners who already graze and have grazing infrastructure are interested in participating. Additional infrastructure, including fencing, temporary fencing, water, and food supplement infrastructure, may be installed to support the grazing plan objectives.

Herbicide Application

Herbicide application will be used for up to 20 acres in targeted situations via backpack sprayer where noxious, invasive plants occur and have a high risk of spreading. Additionally, some herbicide use may occur in shrub vegetation to prevent re-sprouting. All herbicide applications will comply with CalVTP rules and guidelines.

PRIORITY OF TREATMENT AND ADAPTIVE MANAGEMENT

Priority of Treatment

Treatment priority will be decided based on a combination of landowner participation, funding, and the capacity of participating organizations. Priority will be given to treatment units that are already approved, developed, and/or funded. A project plan will be generated as necessary, including funding and treatment timing to guide implementation.

Maintenance and Adaptive Management

Due to this project's long duration, some maintenance of treatments may be required during the project's time frame. Maintenance intervals of 3-5 years are expected in the CalVTP for activities such as thinning or burning in forest and shrub areas. Maintenance will be performed if necessary to accomplish fire protection goals. Maintenance decisions will be made based on available information, funding, and capacity. Annual maintenance in grasslands will be performed primarily through prescribed grazing to reduce annual herbaceous fuel loads along the ridge line when landowners are willing and able.

3. ENVIRONMENTAL INFORMATION

Vegetation Treatment Project Information

1. **Project Title:** Mail Ridge Forest Health and Wildfire Resilience Project

2. **Project Proponent Name and Address:** Humboldt County Resource Conservation District (HCRCD), 5630 South Broadway, Eureka, CA 95503

3. **Contact Person Information and Phone Number:** Jill Demers, Exec Director – jill@hcrcd.org - 707.442.5068 x 5

4. **Project Location:** Southern Humboldt County and western Trinity County, mainly along Mail Ridge. The unincorporated towns to the west of the Study Area are Benbow, Garberville, Redway, Phillipsville, Miranda, Myers Flat, and Weott. The unincorporated towns to the east of the Study Area are Alderpoint, Steelhead, and Fort Seward. Unincorporated towns within the study area are Fruitland Ridge, New Harris, and Harris.

5. **Total Area to be Treated (acres):** 20,000 acres

6. **Description of Project**: The project is described in detail in Chapter II, above. The proposed project includes treatment of up to 20,000 acres of Shaded Fuel Break, Wildland Urban Interface, and Ecological Restoration along Mail Ridge and surrounding areas over 10 years (up to 2,000 acres per year). Proposed treatment activities include mechanical, manual, prescribed fire broadcast burns, prescribed fire pile burns, prescribed herbivory, and herbicide application. The acreages of each treatment type and treatment activity are detailed in Table 1, above.

   Treatment Types

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

   a. ☒ Wildland-Urban Interface Fuel Reduction

   b. ☒ Fuel Break

   c. ☒ 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*]

   d. ☒ Prescribed Burning (Broadcast), up to 20,000 acres (49,747 acres assessed in the Study Area)

   e. ☒ Prescribed Burning (Pile Burning), up to 8,350 acres

   f. ☒ Mechanical Treatment, up to 18,901 acres

   g. ☒ Manual Treatment, up to 20,000 acres (33,400 acres assessed in the Study Area)

   h. ☒ Prescribed Herbivory, up to 5,000 acres

   i. ☒ Herbicide Application, up to 20 acres

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

j. ☒ Grass Fuel Type

k. ☒ Shrub Fuel Type

l. ☒ Tree Fuel Type

Treatment Maintenance

No maintenance treatment is proposed for this project.

7. Regional Setting and Surrounding Land Uses

The Project lies along 32 miles of the crest of Mail Ridge, from the Mendocino County border to the confluence of the Main Stem and South Fork Eel River, in unincorporated Humboldt and Trinity counties. It includes private and industrial forestlands in the Eel and South Fork Eel River Watersheds, rangelands, and wildland-urban interface. Surrounding land uses include agriculture (including timber harvest), rangeland (cattle and sheep), rural residential, limited commerce, and recreation. The unincorporated towns to the west of the Study Area are Benbow, Garberville, Redway, Phillipsville, Miranda, Myers Flat, and Weott. The unincorporated towns to the east of the Study Area are Alderpoint, Steelhead, and Fort Seward. Unincorporated towns within the study area are Fruitland Ridge, New Harris, and Harris.

The Project area is identified for priority treatment in the Humboldt County Community Wildfire Protection Plan (CWPP) WebGIS Database. It includes acreage within CAL FIRE designated Very High Severity Fire Hazard Zone.

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

No other public agency approval is required for this project.

Discussions were held with the California Department of Fish and Wildlife (CDFW) during the planning phase of this project. A draft of the project description, maps, and mitigation measures for California Endangered Species Act (CESA) listed species was provided to CDFW staff on April 11, 2025 to review. On May 9, 2025 comments were received and incorporated into this document.

The County of Humboldt, Planning and Building Department was contacted during the planning phase of this project on March 26, 2025, and County staff responded same day confirming that the proposed project would not require additional County permitting if covered under the CalVTP.

9. 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.

10. 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.*

    Pursuant to CalVTP SPR CUL-2, on June 6, 2025, letters and/or emails inviting the Tribes to consult were mailed to five Tribes with ancestral interest in the project area (Bear River Band of the Rohnerville Rancheria, Grindstone Rancheria, Round Valley Reservation, Scotts Valley Band of Pomo, Wailaki Tribe). No responses have been received thus far; however, the project proponent will collaborate closely with the Tribal groups regarding the Mail Ridge Forest Health and Wildfire Resiliency project. Please see Tribal Cultural Resources discussion in this PSA for details of consultation.

11. Standard Project Requirements and Mitigation Measures. [*Refer to Attachment A to identify which SPRs and Mitigation Measures apply to the project. Complete Attachment A to document the responsible party for each applicable SPR and Mitigation Measure. Check one box below.*]

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

    ☒ There is NO new information which would render mitigation measures previously considered infeasible or not considered in the CalVTP PEIR now feasible OR such mitigation measures have been adopted. [Guidelines Sec.15162(a)(3); PRC Sec. 21166(c)]

    ☐ All applicable SPRs and Mitigation Measures are NOT feasible or will NOT be implemented (provide explanation)

    Explanation: N/A

4. DETERMINATION

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

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

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

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

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

Signature _____ Date 7/10/2025

Jill Demers Executive Director

Printed Name Title

Humboldt County Resource Conservation District

Agency

5. PROJECT-SPECIFIC ANALYSIS

1. Refer to the applicable resource analysis section in the CalVTP PEIR for relevant information on each environmental topic.
2. A brief explanation is required for each impact, including impacts that have been identified in the PEIR as well as any "new impacts".
3. The discussion of each impact identified in the PEIR that is also applicable to the proposed treatment project should generally include the following information:
   - Briefly describe the impact of the proposed vegetation treatment project.
   - Summarize the impact as it was presented in the PEIR, including a statement that the impact is covered in PEIR.
   - Provide evidence that (explain why) the project impact is covered in PEIR, considering whether the proposed treatment is consistent with the treatment types and activities addressed in the PEIR as well as the associated intensity (i.e., duration).
   - Identify SPRs and MMs applicable to the treatment project.
   - (If applicable) Explain which components of the MM or SPR would be applied. This circumstance exists if the MM or SPR allows for deviation from requirements (e.g., minimum buffer distances), identification of parameters (e.g., tree size for retention), and determinations of feasibility. A site- and/or treatment activity-specific explanation for the planned deviation, identified parameter, or feasibility determination must be provided in the PSA.
   - (If applicable) Explain why the impact significance in the PSA is different than that found in the PEIR; substantiate the different (new) significance conclusion.
   - (If applicable) Explain why MM or SPRs identified for this impact in PEIR do not apply to this project. This circumstance may exist where a PS impact was identified in the PEIR, but the impact severity would be less for the treatment project or the MM does not otherwise apply.
4. If the project proponent has determined that a new impact would occur, then the checklist answers for the new impact must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant without the need for mitigation.
5. "Potentially Significant" is appropriate if there is substantial evidence that a new impact may be significant. If there are one or more "Potentially Significant" new impacts identified, or if any impact would constitute a substantially more severe significant impact than was covered in the PEIR, an EIR is required unless one or more mitigation measures incorporated into the project would mitigate the effects to a point where clearly no significant effect on the environment would occur, in which case an MND would be appropriate. AND could be prepared, if the new impact would be less than significant, or MND, if the new impact could be clearly mitigated to less than significant. The analysis of any new impact to support adoption of an ND or MND, along with the analysis of impacts that are within the scope, would be documented in the PSA checklist. If a later EIR is prepared, it could be limited in its scope to the new significant impact(s) or substantially more severe significant impact(s), with the remainder of the impacts that are within the scope of the PEIR being documented in the PSA checklist

and attached to the EIR as an appendix. When preparing any environmental document, the environmental analysis should incorporate by reference pertinent portions of the analysis from the CalVTP PEIR and focus the environmental analysis solely on issues that were not addressed in the CalVTP PEIR.

6. Project proponents should incorporate into the PSA checklist references to information sources for potential impacts. Include a list of references cited in the PSA and make copies of such references available to the public upon request.

5.1 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	AD-3, 4, 5; AES-1, 2, 3; AQ-2, AQ-3	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-3; AES-1, 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	NA	SU	No	Yes

[1]N/A: 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]	☐	☐	☐

Discussion

Impact AES-1

The project area includes both forested areas and open grasslands with expansive views of forests to the east and west. Initial treatments would include burning, mechanical treatments, and manual treatments, which will temporarily alter the visual landscape of the project site by reducing vegetative cover. The potential for these treatments to result in short-term degradation of the visual character of the land was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.2.3, page 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.

Highway 101 from Leggett northward is Eligible for State Scenic Highway status[1]. The project treatments would be high on the ridge above the highway and most views along the stretch of the highway adjacent to the Project Area would be blocked by heavy roadside vegetation. However, project clearing and burning activities may be visible intermittently from rises and open areas along the highway, including from some of the towns along the highway. Smoke from prescribed burns may linger in the valley bottoms and affect views along the highway and in the towns along US 101 until it dissipates. Smoke from pile burning would be short-lived and similar to existing pile burning in the area, but also could linger in the valley bottom along US 101.

With the implementation of SPR AD-3, 4 and 5, AES-1, 2, and 3, and AQ-2 and 3, the treatments will be consistent with local plans and ordinances. Further, all treatment related equipment will be stored outside of the public viewshed and will not block views. The proposed project will promote regrowth with native vegetation and will be similar in appearance to nearby meadow and forested areas. Therefore, the potential for the project to result in short-term substantial degradation of a scenic vista, visual character, or damage to scenic resources would be less than significant.

Impact AES-2

As described above, Highway 101 from Leggett northward is Eligible for State Scenic Highway status[1]. Treatments would include fuel reduction and ecological restoration treatment types. The potential for these treatments to result in long-term substantial degradation of the visual character was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.2.3, page 20-22). As described above, some of the treatment areas would be visible from Highway 101. Grassland areas that are treated would remain similar aesthetically in the long term. Thinned fuel breaks would result in minimal changes in views from the Highway. Views from roadways along Mail Ridge would become more "park-like" in that there would be more open areas between trees and reduced scrubby vegetation than at present. This is not considered a negative aesthetic impact. SPRs AD-3 and AES 1 and 3 would further reduce this impact. Based on the implementation of the applicable SPR's and the nature of the treatment types, the potential for this project to result in long-term substantial degradation of the visual character of the project area or damage to scenic resources would be less than significant.

[1] https://www.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa

Impact AES-3

The project does not propose to create non-shaded fuel breaks, therefore this impact would not apply to this project.

New Aesthetic and Visual Resource Impacts

The proposed treatment is consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has evaluated and considered 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. Therefore, no new impact related to aesthetics and visual resources would occur that is not covered in the PEIR.

5.2. 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]	☐	☐	☐

Discussion

Impact AG-1

The project's proposed treatment area includes about 20,000 acres of lands designated for timber production or other agricultural uses (i.e. grazing). Thinning and the removal of small-diameter conifers (primarily Douglas-fir trees) and tanoak would occur. In the longer term, marketable trees would experience better growth conditions than at present due to the proposed thinning. Other than some expansion of the meadows due to removal of young, smaller trees that have encroached on former meadows, no timber lands would be converted in the long term. Stand-replacing fires could adversely impact agricultural and forestry management by converting stands, displacing people and disrupting harvest schedules. Although treatment activities would alter forest land through vegetation removal, the area would generally support greater than 10 percent of native tree cover thereby maintaining consistency with the definition of forest land as defined by Public Resources Code (PRC) Section 12220(g). Treatment activities under the CalVTP would not result in the loss of forest land or conversion of forest land to a non-forest use. The implementation of the plan may enhance agricultural and forestry resources by reducing the potential for stand replacing fires originating at these private parcels or passing through them. The agricultural and forest resource-

containing properties are zoned AG and TPZ and the project activities are consistent with these zones. Grasslands used for grazing also would be treated by burning. Treatment may result in a loss of a single season of grazing on those lands, but would reduce the potential for long-term encroachment of conifers into these grazing lands, and would help to control invasive species that impede grazing use of the lands such as goat grass or medusa head grass. The project would not convert any timber or other agricultural lands to non-timber or non-agricultural uses. Therefore, this impact would be less-than-significant.

New Agriculture and Forestry Resource Impacts

The proposed treatment is consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has evaluated and considered 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. Therefore, no new impact related to agriculture and forest resources would occur that is not covered in the PEIR.

5.3. 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	AQ-1 AQ-2 AQ-3	AQ-1	SU	No	Yes
Impact AQ-2: Expose People to Diesel Particulate Matter Emissions and Related Health Risk	LTS	Table 3.4-6; Impact AQ-2 pp. 3.4-33 – 3.4-34; Appendix AQ-1	Yes	AQ-1 HAZ-1 NOI-4 NOI-5	NA	LTS	No	Yes
Impact AQ-3: Expose People to Fugitive Dust Emissions Containing Naturally Occurring Asbestos and Related Health Risk	LTS	Section 3.4.2; Impact AQ-3, pp. 3.4-34 – 3.4-35	No	NA	NA	NA	NA	NA
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-2 AQ-3 AQ-6 AD-4	NA	SU	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	AQ-1 HAZ-1 NOI-4 NOI-5	NA	LTS	No	Yes
Impact AQ-6: Expose People to Objectionable Odors from Smoke During Prescribed Burning	SU	Section 2.5.2; Impact AQ-6; pp. 3.4-38	Yes	AQ-2 AQ-3 AQ-6 AD-4	NA	SU	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	Less than Significant

		Mitigation Incorporated	
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact AQ-1

Fossil-fuel-powered equipment and vehicles to be used for forest thinning, removal of invasive plants, removal of encroaching trees/shrubs from historic grasslands, etc. would emit criteria pollutants, the most important being ozone precursors – reactive organic gases (ROG) and nitrogen oxides (NOx), particulate matter in two regulated size categories (PM10 and PM2.5), carbon monoxide (CO) and sulfur dioxide (SO2). Smoke from the combustion of vegetation during the project's prescribed burn phases also contains substantial amounts of criteria air pollutants, especially ozone precursors and particulates. The potential for such emissions to exceed California ambient air quality standards (CAAQS) and/or national ambient air quality standards (NAAQS) was examined in the PEIR.

The North Coast Unified Air Quality Management District (NCUAQMD) is responsible for air quality planning and pollutant control in three counties (i.e., Del Norte, Humboldt, and Trinity) of California's North Coast Air Basin (NCAB). Air quality in the NCUAQMD is listed by the U.S. Environmental Protection Agency (EPA) as "attainment" or "unclassified" for all CAAQS and NAAQS with the exception of the 24-hour PM10 CAAQS in Humboldt County only. In determining whether a project has significant air quality impacts on the environment under CEQA, local Air District thresholds of significance are typically applied during the review process. The NCUAQMD has not formally adopted CEQA significance thresholds. Rather, it recommends the Best Available Control Technology (BACT) emission rates for stationary sources as defined in the NCUAQMD Rule and Regulations, Rule 110 (i.e., New Source Review [NSR] And Prevention of Significant Deterioration [PSD], Section 5.1 – BACT), as listed in **Table 4** below.[2]

Table 4. NCUAQMD Best Available Control Technology Emission Rates

	Significance Thresholds	
Pollutant	**Daily (pounds per day)**	**Annual (tons per year)**
Carbon Monoxide (CO)	500	100
Nitrogen Oxides (NOx)	50	40
Particulate Matter (PM10)	80	15
Particulate Matter (PM2.5)	50	10
Reactive Organic Gases (ROG)	50	40
Sulfur Oxides (SOx)	80	40
Note: Rates are from NCUAQMD Rule 110		

[2] https://www.ncuaqmd.org/planning-ceqa

The Project's emissions of criteria air pollutants from vegetation removal or prescribed burning activities could be potentially significant if their totals from all sources exceed the BACT thresholds. Equipment emissions were estimated using project-specific equipment type/number and hours of use per 100 acres of treatment (as provided by the HCRCD). They were scaled-up to the maximum 2000 treated acres per year in the Project area over each of the total 10 years of Project activity, and then applying State-average pollutant emissions rates for that equipment for each year, all from the CalEEMod emissions model.[3]

Project equipment emissions during the two years of vegetation removal/disposal/restoration work were summed/averaged and compared with NCUAQMD BACT thresholds in **Table 5**, below.

Table 5. Project Equipment Emissions Summary

	Project Equipment Emissions (Year 2026)						**Project Equipment Emissions (Year 2030)**						**Project Equipment Emissions (Year 2035)**					
	NO_x	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**	**NO_x**	**ROG**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**SO_2**
Average Daily (lbs.)	**3.5**	**40.3**	**0.5**	**0.4**	**118.3**	**0.0**	**3.0**	**40.6**	**0.5**	**0.4**	**118.0**	**0.0**	**2.7**	**40.8**	**0.5**	**0.4**	**117.9**	**0.0**
BACT Threshold	50	50	80	50	500	80	50	50	80	50	500	80	50	50	80	50	500	80
Exceeds BACT?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Annual Total (tons)	**0.64**	**7.36**	**0.10**	**0.08**	**21.59**	**0.00**	**0.55**	**7.40**	**0.09**	**0.07**	**21.53**	**0.00**	**0.48**	**7.44**	**0.09**	**0.07**	**21.51**	**0.00**
BACT Threshold	40	40	15	10	100	40	40	40	15	10	100	40	40	40	15	10	100	40
Exceeds BACT?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Equipment emissions alone would not exceed any BACT thresholds, but smoke from the combustion of vegetation during the Project's prescribed burn phases contains substantial amounts of criteria air pollutants and ozone precursors. The PEIR provides the rates of emissions (based on past vegetation treatment projects conducted in California) associated with each treatment activity (i.e., mechanical treatment, manual treatment, and prescribed burning) and predominant fuel type (i.e., tree, shrub, and grass). The emission rates for prescribed burning, by far the most emission-intensive of all treatment activity categories, are summarized in **Table 6**, below.

Table 6. Prescribed Burning Emissions Per Acre

Prescribed Burning	ROG (lbs./acre)	NOx (lbs./acre)	PM10 (lbs./acre)	PM2.5 (lbs./acre)
Tree Fuel Type	2,186.60	166	1,421.30	1,421.30
Shrub Fuel Type	352.8	44.4	142.1	142.1
Grass Fuel Type	166.4	21.9	84.5	84.5

Since up to 2000 acres of the Project site are planned to undergo treatment in each of the 10 years of Project activity and the entire Project site is within the NCUAQMD, the pollutants and ozone precursors emitted during prescribed burning could exceed the mass emissions thresholds recommended by the NCUAQMD (e.g., from the table above,

[3] https://www.caleemod.com/user-guide

one-acre of prescribed burning on "tree fuel type" land would generate 166 pounds per day (lbs./day) of NOx, which would exceed the 50 lbs./day BACT threshold in the NCAB). For the Project, the total acres per year planned for burning is known and the above emission rates were used to estimate the total pollutant emissions (assuming that all burning material is "tree fuel," a worst-case assumption), as shown in **Table 7**. As indicated in the table, emissions from Project prescribed burning activities alone would exceed the NCUAQMD BACT thresholds; the emissions from project equipment/vehicles would further add to the emission totals. Thus, vegetation treatment and prescribed burning activities implemented under the Project would generate levels of criteria air pollutants and ozone precursors that could cause or contribute to exceedances of the NAAQS and CAAQS for ozone, PM10, and PM2.5.

Table 7. Project Prescribed Burning Emissions

Project Treatment Activity	Total Acres	ROG (lbs.)	NOx (lbs.)	PM10 (lbs.)	PM2.5 (lbs.)
Prescribed Fire (Pile Burn)	8,350	18,258,110	1,386,100	11,867,855	11,867,855
Prescribed Fire (Broadcast Burn)	20,000	43,732,000	3,320,000	28,426,000	28,426,000
Total Prescribed Fire		61,990,110	4,706,100	40,293,855	40,293,855
Average Annual (tons)		1,550	118	1,007	1,007
Average Daily (lbs.)		11,921	905	7,749	7,749

This analysis of the Project's criteria pollutant emissions is within the scope of the PEIR because project equipment use and prescribed burn activity for vegetation treatment activities would be consistent with the type of project considered in the PEIR and its analytical methodology. The SPRs applicable to the proposed project are AQ-1, AQ-2, and AQ-3. Certain emission reduction techniques as specified in Mitigation Measure (MM) AQ-1 may be infeasible for practical considerations. For example, it may be cost prohibitive to use equipment meeting the latest fuel efficiency/emission standards, as also may be using biodiesel fuel, electric- or gasoline-powered equipment in place of diesel, and/or using equipment with Best Available Control Technology. In addition, carpooling may not be feasible because of the rural location of the project site. Even so, the emission reduction strategies of MM AQ-1 would apply only to equipment/vehicle emissions, which are a small fraction of the project's total pollutant emissions, and the SPRs AQ-2 and AQ-3 applicable to prescribed burns would not substantially reduce emissions therefrom. This Project impact would remain unavoidable and potentially significant for the same reasons explained in the PEIR, but it would not be a substantially more severe significant impact than that considered in the PEIR.

Impact AQ-2

Use of diesel-powered equipment/vehicles and mechanical equipment for forest thinning could expose people to diesel particulate matter (DPM), a carcinogenic toxic air contaminant (TAC). The potential to expose people to DPM emissions during vegetation treatments was examined in the PEIR. The PEIR found that, because of the short and intermittent nature of removal/restoration activities and the sparsity of sensitive receptors in most rural areas, exposures to incremental cancer risk greater than 10 in one million or to a Hazard Index greater than 1.0 is unlikely.

Although the proposed project's work would go on for ten years, the areas of removal/restoration would encompass an area of approximately 20,000 acres mostly located on/near the ridgelines of the hills of Mail Ridge. The project removal/restoration work would not occur over the entire project area for the entire project period, but on several project parcels a time for up to 2,000 total acres per year. Thus, the source of project DPM emissions would not be in

any one place for an extended time and the source would be located relatively distant from the region's most densely populated pollutant-sensitive areas (i.e., the larger local towns located along USHighway 101 a few miles to the west of the ridgeline treatment areas).

DPM emissions during the project's removal/restoration work would be within the scope of the PEIR, because the project's types and amount of equipment and their duration of use are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are AQ-1, HAZ-1, NOI-4, and NOI-5. This less-than-significant impact of the proposed project DPM emissions is consistent with the PEIR finding, and the project's DPM emissions would not constitute a substantially more severe impact than that identified in the PEIR.

Impact AQ-3

This impact does not apply to the proposed project because no naturally occurring asbestos is mapped on the project site and the project would involve minimal direct ground disturbance.

Impact AQ-4

All feasible measures have been incorporated to minimize smoke emissions as part of the precautionary measures required in the Smoke Management Plan (SPR AQ-2), the Burn Plan (SPR AQ-3), and in the Prescribed Burn Safety Procedures (SPR AQ-6), the latter to prevent unintended adverse effects to offsite receptors. Additionally, SPR AD-4 will alert the public to planned prescribed burns and give them adequate notice to take precautionary measures (e.g., using respirators, closing windows, or temporarily vacating the area, etc.). But any actions taken by the public to reduce exposure to smoke from prescribed burns are voluntary and there are no additional feasible methods to compel the public to reduce its exposure. Thus, even though all feasible emissions reductions and burn notifications have been included in the SPRs, the potential remains for short-term exposure to TACs from unpredictable weather changes. Therefore, this impact would be potentially significant and unavoidable. This is consistent with the PEIR finding and would not constitute a substantially more severe impact than that identified in the PEIR.

Impact AQ-5

Use of diesel-powered equipment for vegetation removal/restoration could expose people to objectionable odors from diesel exhaust, an impact which was examined in the PEIR.

Although the proposed project's work would go on for ten years, the areas of removal/restoration would encompass an area of approximately 20,000 acres, mostly located on/near the ridgelines. Most of the local residential and other odor-sensitive receptors are located in the larger local towns along US Highway 101 a few miles west of the Project treatment areas along the Mail Ridge. The project removal/restoration work would not occur over the entire project area for the entire project period, but sequentially on the many project parcels one or two at a time. Thus, the source of project odor from diesel-powered equipment exhaust would not be in any one place for an extended time and on average the source would be located relatively distant from odor-sensitive areas.

Consistent with the PEIR, project diesel exhaust emissions would be temporary, would not be generated at any one location for an extended period of time, and would dissipate rapidly as most removal/restoration work would occur in undeveloped areas distant from local residences and other odor-sensitive uses. This impact is within the scope of the PEIR because the equipment and its duration of use for the proposed project are consistent with what was analyzed in the PEIR. SPRs applicable to the proposed project are AQ- 1, HAZ-1, NOI-4, and NOI-5. This impact is consistent

with the PEIR finding; it would not be significant nor constitute a substantially more severe impact than that identified in the PEIR.

Impact AQ-6

All feasible measures have been incorporated to minimize smoke emissions as part of the precautionary measures required in the Smoke Management Plan (SPR AQ-2), the Burn Plan (SPR AQ-3), and Prescribed Burn Safety Procedures (SPR AQ-6), the latter to prevent unintended adverse effects to offsite receptors. Additionally, SPR AD-4 will alert the public to planned prescribed burns and give them adequate notice to take precautionary measures (e.g., using respirators, closing windows, or temporarily vacating the area, etc.). But any actions taken by the public to reduce exposure to smoke from prescribed burns are voluntary and there are no additional feasible methods to compel the public to reduce its exposure further. Thus, even though all feasible precautions and notifications have been included in the SPRs, the potential remains for short-term exposure to odors from unpredictable weather changes could occur. Therefore, this impact would be potentially significant and unavoidable. This is consistent with the PEIR finding and would not constitute a substantially more severe impact than that identified in the PEIR.

New Air Quality Impacts

The project's proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has evaluated and considered site specific characteristics to determine that the project treatments are consistent with the 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 CalVTP PEIR. Therefore, no new impact related to air quality would occur that is not covered in the PEIR.

5.4. 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	No	NA	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-4 CUL-5 CUL-6 CUL-7 CUL-8	CUL-2	LTS	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-5 CUL-6 CUL-8	NA	LTS	No	Yes
Impact CUL-4: Disturb Human Remains	LTS	Impact CUL-4, p. 3.5-18	Yes	N/A	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

Consistent with SPR CUL-1, an archaeological and historic records search of the approximately 50,000-acre project area was conducted at the Northwest Information Center (NEIC) on April 17, 2025. (NWIC File No.: 24-651). The records search revealed thirty-seven previously recorded pre-contact archaeological sites, ten isolated precontact artifacts, eighteen historic-period archaeological sites, three historic period isolates, eight historic built environment resources three multicomponent archaeological site containing both historic and precontact elements and one district. No information regarding the evaluation of resources and eligibility to the California Register of Historical

Resources (CRHR) was located during the NWIC record search. Consistent with SPR CUL-2, the archaeologist contacted the Native American Heritage Commission (NAHC) on March 20, 2025 to obtain the latest NAHC provided Native American contact list and a review of their Sacred Lands File. NAHC responded on March 21, 2025with a current list of four Tribes for contact and to report negative results of their Sacred Lands File search. On June 6, 2025, letters and/or emails inviting the Tribes to consult were mailed to the four Tribes indicated by NAHC, as well as, the state recognized Wailaki Tribe, as per the CalFire Native American Contact List (NACL). No responses have been received; however, the project proponent would collaborate closely with all tribal groups that responds with questions, concerns or information.

Impact CUL-1

Proposed treatment activities include manual treatments, mechanical treatments and prescribed burning, which could damage historic built environment resources. The results of the records search conducted on April 17, 2025 (NWIC File No.: 24-651) indicated there are eight historic built environment resources within the Mail Ridge project area. Based on the information received from the NWIC, it is not known whether these historic built environment structures are considered resources under CEQA. Structures (i.e., buildings, bridges, roadways) over 50 years old that have not been recorded or evaluated for historical significance may be present in the project area; these structures will be identified and avoided pursuant to SPR CUL- 7. Therefore this impact would be **less than significant**.

The potential for treatment activities to result in disturbance, damage, or destruction of built-environment structures that have not yet been evaluated for historical significance was examined in the PEIR. This impact is within the scope of the PEIR, because treatment activities and the intensity of ground disturbance of the treatment project are consistent with those analyzed in the PEIR. The inclusion of land in the proposed project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential to encounter built-environment structures that have not yet been evaluated for historical significance in areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact to historical resources 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.

Impact CUL-2

Vegetation treatments would include prescribed burning and mechanical treatments using heavy equipment that could churn up the surface of the ground during treatment as vegetation is removed; these activities may result in damage to known or previously unknown archaeological resources. This could result in damage to known or previously unknown archaeological resources, as described in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, pp. 15-16). Per the PEIR, a record search was conducted for the project area (SPR CUL-1), all geographically affiliated Native American tribes were contacted and notified of treatment activities (SPR CUL-2), pre-field research was conducted for the approximately 50,000-acre project area (SPR CUL-3), and archaeological surveys will take place at a later date by an archaeologically trained resource professional or qualified archaeologist prior to the start of treatments (SPR CUL-4). The NWIC records search revealed thirty-seven pre-contact archaeological sites and ten isolated artifacts, as well as, eighteen historic period archaeological sites, three historic period isolates, three multicomponent (both historic and precontact artifacts) archaeological resources and one historic period district. The archaeological survey identified four new precontact archaeological sites. Archaeological field surveys will be conducted before treatment pursuant to SPR CUL-4 to identify any previously recorded and unrecorded

archaeological resources, and all identified resources would be avoided according to the provisions of SPR CUL-5. Additionally, all crew members and contractors will be trained prior to treatment activities, pursuant to SPR CUL-8.

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. For this project, Mitigation Measure CUL-2 will require 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. The implementation of the applicable SPR's and Mitigation Measure CUL-2 would reduce impacts to inadvertent discoveries, however, it is uncertain if these measures would avoid substantial adverse change to the resource. Therefore, this impact would be **significant and unavoidable**, as determined in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, pp. 15-16).

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the 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 the same, as described above. This impact is within the scope of the PEIR because treatment activities and intensity of ground disturbance of the treatment project are consistent with those analyzed in the PEIR. 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-3

On June 6, 2025, letters and/or emails inviting the Tribes to consult were mailed to five Tribes with ancestral interest in the project area (Bear River Band of the Rohnerville Rancheria, Grindstone Rancheria, Round Valley Reservation, Scotts Valley Band of Pomo, Wailaki Tribe). No responses have been received thus far; however, the project proponent will collaborate closely with the Tribal groups regarding the Mail Ridge Forest Health and Wildfire Resiliency project.

The potential for the proposed treatment activities to cause a substantial adverse change in the significance of a tribal cultural resource during implementation of vegetation treatment was examined in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, page 17). 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. As explained in the PEIR, while tribal cultural resources may be identified within the treatable landscape during development of later treatment projects, implementation of SPRs would avoid any substantial adverse change to any tribal cultural resource. Based on the implementation of applicable SPR's and consistency with the scope of the PEIR, this impact remains **less than significant.**

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the tribal cultural affiliations present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the potential impact to tribal cultural resources is also the same, as described above. 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-4

Vegetation treatments would include mechanical treatments and prescribed burning that could involve the use of heavy equipment, which could uncover human remains. The NWIC records search revealed that two historic period cemeteries lie within the project area. These cemeteries would be avoided during project implementation, thereby adhering to the PEIR. The potential for treatment activities to uncover human remains was examined in the PEIR. This impact is within the scope of the PEIR because the treatment activities and intensity of ground disturbance are consistent with those analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.5.3, page 18). Additionally, consistent with the PEIR, the project would comply with California Health and Safety Code Section 7050.5 and PRC Section 5097 which specify the procedures to be followed in the event of the unexpected discovery of human remains. No SPRs are applicable to this impact. Based on the compliance with the above Health and Safety Code and Public Resource Code and consistency with the scope of the PEIR, this impact would remain **less than significant**.

The inclusion of land in the project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for uncovering 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 the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Archaeological, Historical, and Tribal Cultural Resource Impacts

The proposed treatments are mostly within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.5.1, "Environmental Setting," and Section 3.5.2, "Regulatory Setting," in Volume II of the Final PEIR). The HCRCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, **no new impact** related to archaeological, historical, or tribal cultural resources would occur that is not covered in the PEIR.

5.5. 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	BIO-1 BIO-2 BIO-6 BIO-7 BIO-9 GEO-1 GEO-3 GEO-4 GEO-5 GEO-7 HYD-1 HYD-4	BIO-1a BIO-1b	LTS	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-9 BIO-10 BIO-12 GEO-1 HYD-4	BIO-2a BIO-2b BIO-2g	LTS	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-6 HYD-1 HYD-4	BIO-3a BIO-3b	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 BIO-2 BIO-4 HYD-1 HYD-4	BIO-4	LTS	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-2 BIO-3 HYD-4	None	LTS	No	Yes
Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife	LTS	Impact BIO-6, pp 3.6-197–3.6-198	Yes	BIO-1 BIO-2 BIO-12	None	LTS	No	Yes
Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources	LTS	Impact BIO-7, pp 3.6-198–3.6-199	Yes	AD-3	None	LTS	No	Yes
Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community	No Impact	Impact BIO-8, pp 3.6-199–3.6-200	No	NA	NA	NA	NA	NA

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:								
Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan								

[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

None	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Background Review and Overview

Pursuant to SPR BIO-1, Vollmar Natural Lands Consulting (VNLC) biologists conducted a data review of project-specific biological resources, including habitat and vegetation types, as well as special-status plants, special-status wildlife, and sensitive habitats (e.g., sensitive natural communities, wetlands) with potential to occur in the treatment area (VNLC 2025; see Attachment B, Biological Resources Evaluation Report). The Project includes approximately 20,000 acres of total impact across the approximately 50,000-acre Study Area.

Habitat and vegetation types in the treatment areas were evaluated in the office and then verified during multiple rounds of reconnaissance-level surveys conducted by VNLC ecologists across all habitat types within the treatment area. Land cover classifications within the treatment area include North Coast coniferous forest (USDA: conifer forest/woodland, hardwood forest/woodland, and mixed conifer and hardwood forest/woodland), riparian forest, herbaceous vegetation/grassland, and shrubland.

A list of special-status plant and wildlife species with potential to occur within the treatment areas was compiled by completing a review of the California Natural Diversity Database (CNDDB 2025), United States Fish and Wildlife Information and Planning Consultation Service (IPaC 2025), and California Native Plant Society Rare Plant Inventory (RPI) of California database records for the ten USGS quadrangles containing and surrounding the treatment areas (CNPS 2025), in addition to Appendix BIO-3 (Table 1a, Table 1b, and Table 19) in the PEIR (Volume II) for special-status plants and wildlife that could occur in the ecoregion. A list of sensitive natural communities with potential to occur within the treatment areas was compiled by completing a CNDDB search of the ten USGS quadrangles surrounding

the treatment areas (CNDDB 2023) and reviewing Table 3.6-3 (pages 3.6-25 – 3.6-27) in the PEIR (Volume II) for sensitive natural communities that could occur in the ecoregion.

Ten federal or state-listed wildlife species, 19 non-listed special-status wildlife species, 18 plant species with federal or state listing, or a California Rare Plant Rank (CRPR) of 2 or 1 were determined to have the potential to occur in the treatment area, and 35 other special-status plant species with a CRPR of 4 and 3 were also determined to have potential to occur. These species are discussed in detail under Impact BIO-1 (special-status plants) and Impact BIO-2 (special-status wildlife).

VNLC Ecologists Drew Barber, Nico Vollmar, Katherine Gregory, Jett Hagerty, and Skyler Wrigley conducted reconnaissance-level surveys of the treatment area on January 14, 15, and 22, 2025. The purpose of these surveys was to confirm field conditions as identified during the office review. Field surveys focused on sensitive resources (e.g., aquatic habitat, riparian habitat, sensitive natural communities) and assessed the suitability of habitat in the treatment areas for scoped special-status plant and wildlife species. Vegetation communities were identified, and incidental wildlife observations were also recorded, conforming with the requirements of SPR BIO-1.

In addition to all specific impacts detailed below, SPR BIO-2 (Worker Environmental Awareness Training) will also be implemented for all project treatments. The project proponent will require crew members and contractors to receive training from a qualified Registered Professional Forester (RPF) or Biologist prior to the start of work. 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 qualified RPF or Biologist 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) are encountered and cannot leave the site on their own (without being handled). As detailed, this SPR applies to all treatment activities and treatment types.

Impact BIO-1

Initial vegetation treatments could result in direct or indirect adverse effects on the 53 special-status plant species with potential in the treatment area, through trampling, burning, or soil disturbance.

In addition to SPR BIO-1 (complete) and SPR BIO-2, SPR BIO-7 (survey for special-status plants) would apply to all treatment activities. Where protocol-level surveys are required (per SPR BIO-7), and special-status plants are identified during these surveys, Mitigation Measures BIO-1a and BIO-1b would be implemented to avoid loss of identified special-status plants. Per Mitigation Measures BIO-1a and BIO-1b, if special-status plants are identified during protocol-level surveys, a no-disturbance buffer of at least 50 feet would be established around the area occupied by the species within which mechanical treatment and manual treatment would not occur. SPR BIO-6 requires the implementation of actions to prevent the spread of plant pathogens when working in sensitive communities (e.g., prevention of *Phytopthora* spread). SPR BIO-9 requires the implementation of actions to prevent the spread of invasive plants and noxious weeds that could compete with special-status plants for water, light, and nutrients, minimizing indirect impacts on special-status plants from invasive plants as a result of treatment activities. In addition, SPRs GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7 require the implementation of measures to minimize soil erosion and fugitive dust, thereby reducing potential indirect impacts on sensitive habitats and species from soil

destabilization and sedimentation. SPRs HYD-1 and HYD-4 will be implemented to limit impacts on sensitive stream communities and wetlands that have an increased potential to support special-status plants.

The proposed treatment activities would reduce wildfire risk, promote healthy forest conditions, and remove invasive species. Therefore, with the incorporation of the above-listed SPR and Mitigation Measures, impacts on special-status plant species by treatment activities are expected to be less-than-significant. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact BIO-2

Vegetation treatments could result in direct or indirect adverse effects on special-status wildlife species with suitable habitat within the treatment areas, as described in the following sections.

Special-status Amphibians and Reptiles

Habitat exists within the Study Area for four special-status amphibian species: foothill yellow-legged frog (*Rana boylii*; FYLF) – north coast DPS, northern red-legged frog (*Rana aurora;* NRLF), Pacific tailed frog (*Ascaphus truei*); and southern torrent salamander (*Rhyacotriton variegatus*), and one special-status reptile species: northwestern pond turtle (*Actinemys marmorata;* NPT). All of these species are CDFW Species of Special Concern. Due to population declines across their range, NPT was also proposed for federal listing in 2023. Habitat potentially suitable for amphibian species includes perennial and intermittent streams and wetlands adjacent to the treatment areas and associated uplands. Habitat for NPT is much less suitable as the treatment area excludes the large rivers that run adjacent to the area. However, NPT disperse into upland habitats for nesting and brumation, which merits their consideration as the treatment area gets within dispersal limits for this species (1500 feet).

As per SPR HYD-4, Watercourse and Lake Protection Zones (WLPZs) would be flagged and buffered around all aquatic features, ranging from 50 to 150 feet, depending on the site conditions. However, these measures may not result in full avoidance of this species if they are present further than 150 feet from stream habitat, especially regarding NPT. Because these species could be present within a variety of different habitats throughout the treatment areas while dispersing, there is no feasible way to avoid all potentially suitable habitat for these species. However, treatment activities, including removal of invasive and nonnative vegetation and fuel load reduction, are likely to improve habitat for the species. The potential for treatment activities to result in adverse effects on special-status amphibians was examined in the PEIR.

If avoidance of potential habitat is not possible, then SPR BIO-10 would apply, and focused visual encounter surveys for special-status herptiles would be conducted within suitable aquatic habitat areas prior to treatment activities. If special-status species are identified during focused surveys, Mitigation Measure BIO-2b would be implemented as described below.

Per Mitigation Measure BIO-2b, if special-status species are encountered during focused visual surveys, then a no-disturbance buffer will be implemented. For all treatment activities, the project proponent will establish a no-disturbance buffer around occupied sites. Buffer size will be determined by a qualified 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.

Habitat function for special-status herptiles would be maintained because most treatment activities would not occur within aquatic habitats, riparian habitats, or WLPZs adjacent to treatment areas. Additionally, treatment activities, including removal of invasive and non-native vegetation and fuel load reduction, are likely to improve habitat for the species. Additionally, the implementation of SPR BIO-9 will help prevent the introduction of invasive wildlife (e.g., New Zealand mud snail), which could otherwise compromise the quality of aquatic habitats. Incorporation of the above-listed SPRs and Mitigation Measures would bring the potential impact on special-status herptiles to a less than significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-status and Migratory Birds

Ten special-status bird species may occur within the treatment area: American Goshawk (*Accipiter atricapillus*), Bald Eagle (*Haliaeetus leucocephalus*), Cooper's Hawk (*Accipiter cooperii*), Golden Eagle (*Aquila chrysaetos*), Marbled Murrelet (*Brachyramphus marmoratus*), Northern Spotted Owl (*Strix occidentalis caurina*), Olive-sided Flycatcher (*Contopus cooperi*), Vaux's Swift (*Chaetura vauxi*), Yellow Warbler (*Setophaga petechia*), and Yellow-breasted Chat (*Icteria virens*). Additionally, nesting migratory birds may occur within the treatment areas.

Nesting habitat potentially suitable for these ten species is present within and adjacent to the treatment areas. Per SPR BIO-1.1, if it is determined that adverse effects on suitable habitat for nesting special-status birds can be clearly avoided by conducting treatments outside of the season of sensitivity (i.e., nesting bird season), then no mitigation would be required. Adverse effects on nesting special-status birds would be clearly avoided by conducting treatments between September 1 and February 28, outside of the nesting bird season (March 1–August 31).

If treatments are conducted during portions of the nesting bird season, these activities could result in direct loss of active special-status bird nests or disturbance to active nests from auditory and visual stimulus (e.g., heavy equipment, chain saws, vehicles, personnel), potentially resulting in abandonment of nests and loss of eggs or chicks. This potential for treatment activities to result in adverse effects on special-status birds was examined in the PEIR, and if treatments would occur during the nesting season, SPR BIO-10 and SPR BIO-12 would apply. These SPRs would require pre-construction visual nesting surveys (including daytime stand searches for NSO), to be conducted in all suitable nesting habitat no more than prior to treatments. In addition, no more than 14 days prior to project activities conducted during the NSO nesting season that are within 1,300 feet of an NSO AC and/or within 1,300 feet of NSO nesting roosting habitat on state park property, where NSO surveys have not occurred or survey information is not available, one nighttime survey that includes broadcasting calls followed by a daytime stand search shall be conducted. CDFW will be contacted prior to any project activities within the 1,300 ft (~0.25mile) protection area. This survey would be conducted by a qualified biologist with knowledge of and the ability to recognize NSO and other nesting bird species. If no active nests are observed during nesting surveys, then no additional mitigation would be required.

If active nests of any California fully protected or federal or state-listed bird are observed, then Mitigation Measure BIO-2a would be implemented. Additionally, CDFW and USFWS will be notified if NSO is observed. Under Mitigation Measures BIO-2a, a no-disturbance buffer of at least 0.25 mile would be established around NSO nests, and a 500-

foot buffer would be established around active Golden Eagle or American Peregrine Falcon nests. No machinery or power equipment (including chainsaws) would occur within this buffer until the chicks have fledged, as determined by a qualified biologist. No work of any sort would be allowed within 0.25 mile of an active NSO nest. Trees containing active or inactive NSO nests would not be removed. Additionally, trees containing active or inactive Bald Eagle nests would not be removed pursuant to the Bald and Golden Eagle Protection Act.

If active other special-status or migratory bird nests (not Fully Protected or CESA/ESA listed) are observed during focused surveys, then Mitigation Measure BIO-2b would be implemented. Under Mitigation Measures BIO-2b, a no-disturbance buffer of at least 100 feet would be established around the nests of other special-status or migratory birds, and no treatment activities would occur within this buffer until the chicks have fledged as determined by a qualified biologist.

Under Mitigation Measure BIO-2a, habitat function for NSO, Marbled Murrelet, and any other observed Fully Protected or CESA/ESA listed birds would be maintained by opening the understory and removing smaller trees, allowing larger trees to thrive and reducing the risk of wildfire. A qualified RPF or biologist (in consultation with CDFW) 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.

Incorporation of the above-listed SPRs and Mitigation Measures would bring the potential impact to a less-than-significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-status Fish

Habitat potentially suitable for five special-status fish species is present in the treatment area: chinook salmon – California coastal ESU (*Oncorhynchus tshawytscha* pop. 17), coho salmon – Southern Oregon/Northern California ESU (*Oncorhynchus kisutch* pop. 2), Pacific lamprey (*Entosphenus tridentatus*), steelhead – Northern California DPS summer-run (*Oncorhynchus mykiss irideus* pop. 48), and steelhead – Northern California DPS winter-run (*Oncorhynchus mykiss irideus* pop. 49). The Eel River is also designated as chinook, coho, and steelhead critical habitat. WLPZs ranging from 50 to 150 feet from all aquatic habitats within the treatment areas would be implemented per SPR HYD-4 and will provide protection for special-status fish.

Habitat function for special-status fish would be maintained because treatment activities will not disrupt or impact perennial stream function in a meaningful way, and restoration activities are designed to benefit fish species by reducing the risk of catastrophic wildfire. Incorporation of the above-listed SPR would bring the potential impact to a less-than-significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Special-status Insects

Habitat potentially suitable for one special-status insect species, the western bumble bee (*Bombus occidentalis*), is present in the treatment areas in open grassland and shrublands. Per SPR BIO-1, if it is determined that adverse effects on western bumble bees can be clearly avoided by physically avoiding the suitable habitat, then no mitigation would be required. However, it is unlikely that all potentially suitable habitat for these species can be avoided. As a result, SPR BIO-10 would apply, and focused surveys for western bumble bees would be conducted within suitable

habitat prior to the implementation of mechanical and manual treatments. If a western bumble bee individual, nest, or hibernacula is detected, a 50 foot no operations buffer shall be established and CDFW shall be contacted to discuss any additional avoidance measures.

In addition, Mitigation Measure BIO-2g would be applied, initiating several protective measures for the western bumblebee. Specifically, MM BIO-2g specifies that if special-status bumble bees are identified as occurring during review and surveys under SPR BIO-1 and confirmed during 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 high-quality habitat for special-status bumble bees will occur from October through February to avoid the bumble bee flight season, if feasible. However, grassland areas with high levels of invasive grasses (including medusa head and goat grass) require prescribed burning inside this window (likely June) due to the timing of the targeted life stage of those species. Thus, areas with high levels of invasive grasses or oak woodlands with low quality habitat may be treated within 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).

It is anticipated that special-status bumble bee species would benefit from the proposed project treatments since habitat function is reasonably expected to improve with implementation of the treatment due to eradication of invasive species and a reduction of risk of catastrophic wildfires (as will be demonstrated in the PSA).

SPRs BIO-1, BIO-2, BIO-10, and MM BIO-2g would bring the potential impact of this project on this species to a less-than-significant level. The impact of the proposed project on this species is less than the impacts analyzed in the PEIR on this species.

Special-status Mammals

Twelve special-status mammal species have potential to occur in the project area, including: American badger (*Taxidea taxus*), fisher (*Pekania pennanti*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), fringed myotis (*Myotis thysanodes*), hoary bat (*Lasiurus cinereus*), long-eared myotis (*Myotis evotis*), silver-haired bat (*Lasionycteris noctivagans*), Sonoma tree vole (*Arborimus pomo*), northern California ringtail (*Bassariscus astutus raptor*), Humboldt marten (*Martes caurina humboldtensis*), and Western red bat (*Lasiurus frantzii*). Of these 12, the Humboldt marten is the only listed species (Federal Threatened, State Endangered). Both Humboldt marten and

the fisher prefer tree cavities within large, mature trees and snags – and both have very specific habitat requirements that include high canopy closure and complex forest structure with snags and downed woody debris. American badgers prefer open areas with little vegetation cover, where they construct elaborate underground burrows. Northern California ringtails also utilize tree cavities to rear young but are more reliant on close proximity to water. The Sonoma tree vole also utilizes trees, preferably tall trees, and constructs nests of Douglas-fir needles. The habitat preferences of the bats are variable regarding each species. Pallid bats prefer drier, more open habitats, Western red bats primarily utilize riparian woodland with dense foliage, and Townsend's big-eared bat is most adapted to the conifer-dominant and mixed-conifer habitats that represent the bulk of the treatment area.

Per SPR BIO-10, a focused pre-construction survey by a qualified biologist should be conducted prior to any treatments that could disturb these species. If the Humboldt marten is observed during surveys, CDFW and/or USFWS will be notified and Mitigation Measure BIO-2a will be implemented. Treatment will not be implemented within the occupied habitat. Any treatment activities outside the 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, treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of young.

Additionally, a qualified 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 large cavities; caves, burrows, 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. Also, tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the Humboldt marten and 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/ESA or that are Fully Protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.

For the remaining special-status mammal species, if they are observed during surveys, then Mitigation Measure BIO-2b will be implemented for all treatment activities except prescribed burning, and a no-disturbance buffer will be established around occupied sites. 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. For prescribed burning, the project proponent will implement the treatment outside the sensitive period of the species' life history if burning within potentially suitable habitat (e.g., outside the breeding season), during which the species may be more susceptible to disturbance, or disturbance could result in loss of young.

If any CESA or ESA-listed species are encountered during the project, CDFW and/or USFWS will be notified. Incorporation of the above-listed SPRs and Mitigation Measures would bring the potential impact to a less than

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

Impact BIO-3

Vegetation treatments could result in direct or indirect adverse effects on sensitive habitats, including designated sensitive natural communities. The potential for treatment activities to result in adverse effects on sensitive habitats was examined in the PEIR. Due to the large extent of the Study Area, it has the potential to support multiple sensitive natural communities known from the Northern California Coast and Northern California Coast Ranges Ecological Sections. A preliminary search via the Manual of California Vegetation Online returned over 70 sensitive alliances (CA rarity S1-S3) with potential to occur within the elevation of the Study Area in those sections. By project design, the HCRCD would retain vegetation types with characteristics qualifying as sensitive natural communities to the extent possible. Pursuant to SPR BIO-3, a qualified RPF or biologist would perform a protocol-level plant and vegetation survey, and map and GPS record the limits of any potential sensitive habitat and sensitive natural community identified in the treatment area.

If treatment activities within sensitive natural communities cannot be avoided, then Mitigation Measure BIO-3a would apply in these areas. Under Mitigation Measure BIO-3a, the qualified RFP or biologist would determine the natural fire regime, condition class, and fire return interval for each sensitive natural community and oak woodland type. Treatment activities in sensitive natural communities would be designed to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function. If habitat function of sensitive natural communities would not be maintained through implementation of Mitigation Measure BIO-3a, then Mitigation Measure BIO-3b would apply, and unavoidable losses of these resources would be compensated through restoration or preservation of these vegetation types within or outside of the treatment areas. Work in riparian communities will adhere to SPR BIO-4, which includes designing treatments in riparian habitats to retain or improve habitat functions by retaining target canopy covers, limited to removal of uncharacteristic fuel loads, minimizing removal of large, native riparian hardwood trees, notifying CDFW under Section 1602, minimizing ground disturbance, and avoiding removal of shading vegetation. SPR BIO-6 would prevent the spread of plant pathogens (e.g., *Phytopthera*). In addition, application of SPR HYD-1 would reduce impacts on wetland habitat through the implementation of Waste Discharge Requirements (WDRS) and Basin Plan Prohibitions. Under SPR HYD-4, WLPZs ranging from 50 to 150 feet would be established adjacent to all Class I and Class II streams within the treatment areas, and WLPZs of at least 25 feet would be established around all Class III ephemeral streams within the treatment areas. The establishment of WLPZs would protect a large portion of riparian habitats on site.

This potential impact on sensitive habitats is within the scope of the PEIR because the affected sensitive natural communities were analyzed in the PEIR, and the treatment activities and intensity of disturbance as a result of implementing vegetation treatments are consistent with those analyzed in the PEIR. Incorporation of the above-listed SPRs and Mitigation Measures would bring the potential impact to a less than significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact BIO-4

Vegetation treatments could result in direct or indirect adverse effects on state or federally protected wetlands. The potential for treatment activities to result in adverse effects on state or federally protected wetlands was examined in the PEIR.

Application of SPR HYD-1 would reduce impacts on wetland habitat through the implementation of Waste Discharge Requirements (WDRS) and Basin Plan Prohibitions. Under SPR HYD-4, WLPZs ranging from 50 to 150 feet would be established adjacent to all Class I and Class II streams within the treatment areas, and WLPZs of at least 25 feet would be established around all Class III ephemeral streams within the treatment areas. The establishment of WLPZs would avoid all state or federally protected wetlands associated with stream corridors.

For state or federally protected wetlands outside stream corridor WLPZs, Mitigation Measure BIO-4 will be employed and would reduce potentially significant impacts on state and federally protected wetlands by requiring delineation and avoidance of these wetlands with no-disturbance buffers clearly marked so that no inadvertent damage or destruction to these habitats would occur during treatment activities - or would require that prescribed burns be designed to avoid loss of wetland functions and values. With the implementation of mitigation, adverse effects to wetlands would not be substantial. This impact would be less-than-significant.

It is possible that some culvert crossings within existing roadways may need to be updated to allow safe passage of equipment. If culvert improvements are required, any instream work (though ultimately beneficial for improvements to roadways, erosion reduction, and wildlife movement) could have temporary or permanent impacts. Therefore, prior to work in riparian or in-stream habitats, the HCRCD will apply SPR BIO-4 (riparian) and consult with regulatory agencies to confirm if additional permits are needed, such as Regional Water Quality Control Board (RWQCB) Section 401, Army Corps of Engineers (ACOE) Section 404, or CDFW 1602 (SPR HYD-1).

This potential impact on wetlands is within the scope of the PEIR as the treatment activities and intensity of disturbance are consistent with those analyzed in the PEIR. Incorporation of the above-listed SPRs and Mitigation Measures would bring the potential impact to a less-than-significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact BIO-5

Initial vegetation treatments could result in direct or indirect adverse effects on wildlife movement corridors and nurseries because suitable wildlife habitat is present in treatment areas. The potential for treatment activities to result in adverse effects on wildlife movement corridors and nurseries was examined in the CalVTP PEIR.

Based on review and survey of project-specific biological resources (SPR BIO-1), some portions of the Study Area include modeled essential connectivity areas, and therefore provide a regionally-significant function as a wildlife movement corridor. Implementation of SPR BIO-1, BIO-2, BIO-3, and SPR HYD-4 would provide protection to wildlife access through the project site. Due to the nature of the proposed treatment activities, implementation of these treatment activities would not result in a substantial change in the existing conditions that facilitate wildlife movement in treatment areas, and inclusion of the SPRs would bring the potential impact to a less than significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact BIO-6

Initial vegetation treatments could result in direct or indirect adverse effects resulting in reduction of habitat or abundance of common wildlife, including nesting birds, because habitat suitable for these species is present throughout treatment areas. The potential for treatment activities to result in adverse effects on these resources was examined in the PEIR.

Adverse effects on nesting birds would be clearly avoided by conducting treatments between September 1 and February 28, outside of the nesting bird season (March 1–August 31). If treatments are conducted during portions of the nesting bird season, then these activities could result in direct loss of active nests or disturbance to active nests from auditory and visual stimulus (e.g., heavy equipment, chain saws, vehicles, personnel) potentially resulting in abandonment of nests and loss of eggs or chicks.

If treatments would occur during the nesting season, then SPR BIO-12 would apply, and a survey for common nesting birds would be conducted within the treatment areas by a qualified biologist prior to treatment activities. If no active bird nests are observed during focused surveys, then additional mitigation would not be required. If active nests of common bird species are observed during focused surveys, disturbance to the nests would be avoided by establishing an appropriate buffer around the nests, modifying treatments to avoid disturbance to the nests, or deferring treatment until the nests are no longer active as determined by a qualified biologist.

The potential for adverse effects on common wildlife, including nesting birds, is within the scope of the PEIR because the treatment activities and extent of expected disturbance as a result of implementing vegetation treatments are consistent with those analyzed in the PEIR. SPRs applicable to this impact are BIO-1, BIO-2, and BIO-12. Incorporation of the above-listed SPRs would bring the potential impact to a less-than-significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact BIO-7

Pursuant to SPR AD-3, the design and implementation of the project is consistent with applicable local plans, policies, and ordinances protecting biological resources and would have a less-than-significant impact. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact BIO-8

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

New Biological Resource Impacts

The proposed treatments are mostly within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has considered the site-specific characteristics of the proposed treatment project and determined that they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.6.1, "Environmental Setting," and Section 3.6.2, "Regulatory Setting," in Volume II of the Final PEIR). The HCRCD has also determined that the circumstances

under which the proposed treatment project would be undertaken are consistent with those considered in the PEIR. No changed circumstances are present that would give rise to any new significant impacts not addressed in the PEIR. Therefore, no new impact related to biological resources would occur that is not covered in the PEIR.

For a table of special-status plants and wildlife with potential to occur in the Study Area, please see **Appendix B. Biological Evaluation Report.**

5.6. 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	AD-3, GEO-1-8, 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	GEO-1-5, 7, 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

Impact GEO-1

Vegetation treatments would include burning, manual, and mechanical treatment activities, as well as prescribed herbivory and small areas of herbicide application, involving vegetation removal and varying levels of soil disturbance, which have the potential to increase rates of erosion and loss of topsoil. The potential for these treatment activities to cause substantial erosion or loss of topsoil was examined in the PEIR. Mechanical treatments using heavy machinery are the most likely to cause soil disturbance that could lead to substantial erosion or loss of topsoil, especially in areas of steep slopes. However, all treated areas, including burn areas, would result in bared soils, which would increase the potential erosion hazard. The proposed project would implement mechanical and/or burn treatments on up to 20,000 acres over a 10-year period (up to 2,000 acres/year), including areas where steep slopes occur (the steepest slopes and WLPZs would be manually treated). Consistent with the PEIR, SPRs GEO-1 through GEO-8 and HYD-4, would be implemented, which would avoid and minimize the risk of substantial erosion and loss of topsoil as a result of project implementation. This impact is within the scope of the PEIR because the proposed treatment activities and intensity of vegetation removal and associated ground disturbance under the proposed project is consistent with what was analyzed in the PEIR. This impact of the proposed project is consistent

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

Impact GEO-2

Vegetation treatments would include vegetation removal in areas with steep slopes, which could decrease the stability of slopes and increase the risk of landslides. The potential for treatment activities to increase landslide risk was examined in the PEIR. Removing vegetation during treatments implemented under the proposed project could potentially increase the risk of landslide by baring slopes and removing root systems that stabilize slopes. Consistent with the PEIR, this risk is addressed with the implementation of SPRs GEO-1 through GEO-5, GEO-7, and GEO-8, which require stabilization of disturbed soil, erosion inspections, prohibiting mechanical treatment on steep slopes, and that a registered professional forester or licensed geologist evaluate treatment areas with slopes greater than 50 percent for unstable areas. This impact is within the scope of the PEIR because the extent and methods of vegetation removal and required avoidance of steep slopes and areas of instability are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Geology, Soils, Paleontology, and Mineral Resource Impacts

The proposed treatments are within the CalVTP treatable landscape, and are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.7.1, "Environmental Setting," and Section 3.7.2, "Regulatory Setting," in Volume II of the Final PEIR). The HCRCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impacts related to geology, soils, paleontology, or mineral resources would occur that are not covered in the PEIR.

5.7. 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	NA	GHG-2	SU	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]	☐	☐	☐

Discussion

Impact GHG-1

The *California Forest Carbon Plan* ("Forest Plan", CARB 2018) implements policies to meet the carbon reduction goals for forests as embodied in the *California Climate Change Scoping Plan* (2017). The Forest Plan would increase the rate of forest restoration and fuels reduction treatments by mechanical/manual thinning and by prescribed fire to ensure that the State's continuing timber operations contribute to the achievement of healthy and resilient forests that remain a net sink for carbon.

Consistency of mechanical/manual vegetation treatments and prescribed burning with applicable plans, policies, and regulations aimed at reducing greenhouse gas (GHG) emissions was examined in the PEIR. Although one-time GHG emissions would occur from project equipment/vehicles used to implement vegetation treatments, the proposed project would restore natural forest habitat and reduce wildland fire hazard, thus increasing carbon sequestration over the long-term. This impact is within the scope of the PEIR because the proposed project's treatment activities, short-term resultant GHG emissions, and long-term GHG reductions are consistent with the overall impacts of

vegetation treatments analyzed in the PEIR. This impact of the proposed project would not constitute a substantially more severe impact than what was covered in the PEIR.

Impact GHG-2

The proposed project includes treatments such as mechanical/manual forest thinning and prescribed burning of the removed trees/shrubs/grasses. Project use of fossil-fueled equipment/vehicles and its treatment of removed materials through burning would result in GHG emissions.

Project equipment/vehicle GHG emissions were estimated using project-specific equipment type/number and activity duration on each identified project work parcel and then applying State-average pollutant emissions rates for that equipment from the CalEEMod emissions model.[4] The total average annual project equipment/vehicle GHG emissions (with project work occurring over ten years at up to 2,000 acres per year) from the project site would be about 300 metric tons of carbon dioxide equivalent (CO2e).

Combustion of vegetation during the project's prescribed burn phases would also produce substantial amounts of GHG. The PEIR provides the rates of GHG emissions based on past vegetation treatment projects conducted in California associated with each treatment activity (i.e., mechanical treatment, manual treatment, and prescribed burning) and predominant fuel type (i.e., tree, shrub, and grass). For the proposed project, the total acres planned for burning (which is by far the largest component of treatment GHG emissions) are known and were used with GHG emission rate for this treatment to estimate the total average annual/daily GHG emissions from the burning of treatment material (assuming that all burning material is "tree fuel," a worst-case assumption) would be as shown on Table 8.

Table 8. Project Treatment Activities and Associated Emissions (CO2e Metric Tons)

Project Treatment Activity	CO2e (MT)
Prescribed Fire (Pile Burn)	527,303
Prescribed Fire (Broadcast Burn)	1,263,000
Total Prescribed Fire	1,790,303
Average Annual	89,515
Average Daily	344

Project vegetation treatments through equipment/vehicle use and prescribed burns would result in GHG emissions. The general potential for vegetation treatments to generate GHG emissions was examined in the PEIR. Consistent with the PEIR, project treatment activities would result in GHG emissions from fossil-fueled off-road equipment and hand tools (e.g., chain saws) and prescribed burns. The overall project impact (primarily from prescribed burning) would be significant, especially due to prescribed burning, even with the implementation of Mitigation Measure GHG-2. No other feasible and effective mitigation exists to substantially reduce GHG emissions to a less-than-significant level. This impact is within the scope of the PEIR because the proposed project activities, as well as the

[4] https://www.caleemod.com/user-guide

associated equipment use and duration of use, are consistent with those analyzed in the PEIR. In addition, the intent of the proposed project is to reintroduce more fire-resistant/adaptive native plant species to the project site and thereafter to reduce wildfire risk and their GHG emissions. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Impacts Related to GHG Emissions

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

5.8. 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]	☐	☐	☐

Discussion

Impact ENG-1

Use of vehicles and mechanical equipment during treatment and restoration activities would result in the consumption of energy through the use of fossil fuels. The use of fossil fuels for equipment and vehicles was examined in the PEIR. The consumption of energy during implementation of the proposed project from the use of equipment and vehicles is within the scope of the PEIR because the types of activities, as well as the associated equipment and duration of proposed use, are consistent with those analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Energy Resource Impacts

The proposed treatments are entirely within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.9.1, "Environmental Setting," and Section 3.9.2, "Regulatory Setting," in Volume II of the Final PEIR). The HCRCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to energy use would occur that is not covered in the PEIR.

5.9. 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-1-5	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, 6, 7, 8, and 9,	None	NI	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	No	NA	NA	NI	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]	☐	☐	☐

Discussion

Impact HAZ-1

Vegetation treatments would include burning, manual, and mechanical treatment activities, which would require the use of fuels, which are considered common hazardous materials. The potential for treatment activities to cause a significant health hazard from the use of hazardous materials was examined in the PEIR. This impact is within the scope of the PEIR because the types and locations of treatments and associated equipment and types of hazardous materials that would be used are consistent with those analyzed in the PEIR. SPR HAZ-1 would be applicable to the proposed project. Any hazardous materials and emissions would result from the use of diesel fuel, vehicle lubricants, chainsaw and mechanized hand tool fuel, and chainsaw bar oil; these materials will be transported and stored in appropriate containers. Hazardous emissions also may result from burning and the use of fuels to ignite pile burns. All personnel will wear personal protective equipment (PPE) and will be properly trained in the usage of equipment.

All equipment associated with the proposed project will comply with SPR HAZ-1 to ensure proper maintenance and minimize leaks. SPR HAZ-2 requires mechanized hand tools to have spark arrestors and will be implemented to minimize the risk of potential ignitions. Based on the proper storage and transportation of fuels and oils, the use of PPE, and the implementation of the applicable SPR's, the potential for this project to result in significant health hazards from the use of hazardous materials is less-than-significant. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HAZ-2

The project would use manually applied herbicides for localized invasive species control and cut stump treatment on up to 20 acres for follow-up treatment to prevent re-sprout. Only approved herbicides would be used, and all herbicide use would be by licensed applicators and according to the herbicide labels. Herbicides would be applied manually by backpack sprayers or direct painting on cut stumps. No broadcast spraying would occur. Preparation of a spill control plan in compliance with SPR HAZ-5, and following herbicide hazard minimization measures contained in SPR HAZ 6, 7, 8, and 9, would reduce this potential impact to a less-than-significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HAZ-3

The initial treatments of this proposed project include mechanical treatments that will disturb soils, which could 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, page 18-19). Based on the Cortese List from the Department of Toxic Substances Control (DTSC; accessed March 13, 2025[5]), there are no known hazardous waste sites identified within the proposed project area. In addition, the project area does not appear to contain any naturally occurring asbestos. There are no SPR's that apply to this project impact. Based on the absence of hazardous waste sites, no impact is expected for this project to result in public or environmental exposure to hazards from known hazardous waste sites.

New Hazardous Materials, Public Health and Safety Impacts

The proposed project is consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered all site-specific characteristics of the proposed treatment project and determined that they comply with the regulatory and environmental setting conditions as stated in the PEIR (CalVTP Final PEIR Volume II Sections 3.10.1 and 3.10.2). No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to hazardous materials, public health, and safety would occur that are not covered in the PEIR.

[5] https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Humboldt+County

5.10. 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. 3.11-23 – 3.11-25	Yes	AQ-3; BIO-4; GEO-1-8; HAZ- 1, 5; HYD- 1, 2, 4, 6	NA	LTS	No	Yes
Impact HYD-2: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Manual or Mechanical Treatment Activities	LTS	Impact HYD-2, pp. 3.11-26 – 3.11-27	Yes	BIO-4; GEO-1-8; HAZ- 1, 5; HYD- 1, 2, 4, 6	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. 3.11-27	Yes	BIO-4: GEO-1, 3, 4, 5, 7, 8; HYD-1, 2, 3, 4,	NA	LTS	No	NA
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	LTS	Impact HYD-4, pp. 3.11-28 – 3.11-29	Yes	BIO-4: GEO-1, 3, , HAZ-1, 5, 7: HYD-1, 2, 4, 5, 6	NA	LTS	NA	NA

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:								
the Ground Application of Herbicides								
Impact HYD-5: Substantially Alter the Existing Drainage Pattern of a Treatment Site or Area	LTS	Impact HYD-5, p. 3.11-29	Yes	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 proposed vegetation removal could create bare slopes and thereby increase erosion potential, which could result in impacts to water quality of on-site and downstream water courses, which feed into the Main Stem of the Eel River to the north and the South Fork of the Eel River to the south. The East Branch of the Eel River, Bluff Creek, Dean Creek, Tuttle Creek, Williams Creek, Rocky Glen Creek, Ohman Creek, Anderson Creek, Fish Creek, Dry Creek, Elk Creek, Bridge Creek, Mowry Creek, Truss Creek, Feese Creek, flow into the South Fork Eel River within the project watershed. Similarly, over a dozen named creeks including Poison Oak Creek, Pipeline Creek, Bluff Creek, Bloyd Creek, Bell Creek, McCann Creek, Sonoma Creek, Willow Draw Creek, Jackass Creek, Soda Creek, Powers Creek, and Mill Creek drain northward into the Main Stem Eel River watershed. Any of these streams may be affected by the project activities, as described below.

Impact HYD-1

Use of vehicles and flammable materials on site during prescribed burns and pile burning could involve risk of fuels and vehicular drippings entering the local water courses. Implementation of the burn plan (SPR AQ-3), erosion control measures (SPR BIO-4 and GEO 1-8), hazardous materials controls (SRP HAZ 1 and 5), and water quality protection measures (SPR HYD-1, 2, 4, and 6) would assure that these impacts are reduced to a less-than-significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HYD-2

Manual and mechanical treatment activities would disturb soils and require the use of fuels, which have the potential to enter waterways and degrade water quality. The potential for mechanical and manual treatment activities to violate water quality regulations or degrade water quality was examined in the PEIR. This impact is within the scope of the PEIR because the types and locations of treatment activities and use of heavy equipment and hand-held tools to remove vegetation are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are HYD-1, HYD-2, HYD-4, HYD-6, GEO-1 through GEO-4, GEO-7, GEO- 8, and HAZ-1. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HYD-3

The project includes up to 5,000 acres of prescribed herbivory over 10 years. Most of this herbivory would be located on ranch lands already subject to grazing. As discussed in the PEIR, the potential for water quality effects from prescribed herbivory can be effectively controlled through active grazing management and application of best practices. Relevant best practices are encompassed in SPR HYD-3 and include active herding to prevent livestock from lingering in riparian areas, establishing riparian buffers where livestock are excluded, fencing streams and providing access to alternative water sources. Implementation of this SPR would avoid impacts to water quality caused by the persistence of grazing animals in riparian areas for extended periods of time, such as denuding of vegetation, loss of soil structure and increased sedimentation, and accumulation of manure and urine which contribute nutrients and pathogens to adjacent waterbodies. The action of animal hoofs can lead to erosion of stream banks and on gentle slopes trampling of moist soils can create soil compaction, increasing the likelihood of runoff. Additionally, SPR HYD-3 limits stream access points and crossings which would avoid and minimize water quality degradation resulting from the concentration of runoff and alteration of drainage patterns caused by the creation of new trails when animals move across the stream to access water, shade or new grazing areas.

Because qualifying prescribed herbivory projects implemented under the CalVTP would exclude grazing animals from sensitive areas, provide alternative water sources, and move animals when erosion is observed, the risk of substantial degradation to surface or groundwater quality from prescribed herbivory would be avoided and minimized; this impact would be less than significant. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HYD-4

Herbicide application will be used for up to 20 acres in targeted situations via backpack sprayer where noxious, invasive plants occur and have a high risk of spreading, as well as in shrub vegetation re-sprout situations. All herbicide applications would comply with CalVTP rules and guidelines. No aerial application or broadcast spraying of herbicides would occur, consistent with the analysis in the PEIR. SPR HYD-5 prohibits herbicide application during precipitation or if precipitation is forecast 24 hours before or after project activities. Some formulations may require longer precipitation-free windows, as required by the label, which would be adhered to by applicators. Additionally, SPR HYD-5 prohibits non-aquatic herbicide formulations from being applied within 50 feet of a waterbody riparian area or wetland and prohibits the use of all herbicides within WLPZs without notification to the applicable regional

water quality control board. These precautions would avoid and minimize the potential for herbicides to leach into groundwater or contaminate runoff.

Although the protections described above would prevent impacts to water quality during herbicide application, the accidental misapplication or spill of an herbicide could degrade water quality. The potential for water quality degradation from an accidental misapplication or spill would depend on the location and site conditions, herbicide formulation, and quantity of material. In addition to the label requirements for storage, transport, mixing and container disposal, SPR HAZ-5 requires that all projects implemented through the proposed program develop a Spill Prevention and Response Plan and that projects maintain an onsite spill kit throughout the life of the activity. SPR HAZ-7 also includes requirements for rinsing and disposal of herbicide containers and requires that equipment and personnel washing occur in a manner that protects water resources. These protections would avoid and minimize the potential for misapplication or spills of herbicides to adversely affect water quality.

As discussed above, qualifying treatments under the CalVTP would use herbicides in accordance with the manufacturer's label directions and implement all relevant SPRs, which would reduce the potential for contamination of surface or groundwater resources. Therefore, risk of substantial degradation to surface or groundwater quality from herbicide application would be avoided and minimized; this impact would be less than significant. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HYD-5

Use of mechanical equipment and off-road vehicles during treatments could cause ground disturbance and erosion, which could directly or indirectly modify existing drainage patterns in localized areas of the project. Large-scale drainage patterns would not be altered due to the deeply incised river and creek canyons. The potential for treatment activities to substantially alter the existing drainage pattern of a treatment site was examined in the PEIR. This impact on site drainage is within the scope of the PEIR, because the types and locations of treatments and treatment intensity are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are HYD-1, HYD-2, HYD-4, HYD-6, GEO-1, GEO-2, and GEO-5. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Hydrology and Water Quality Impacts

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.11.1, "Environmental Setting," and Section 3.11.2, "Regulatory Setting," in Volume II of the Final PEIR). The HCRCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to hydrology and water quality would occur that is not covered in the PEIR.

5.11. 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	SPR AD-3, SPR AD-9	NA	LTS	No	Yes
Impact LU-2: Induce Substantial Unplanned Population Growth	LTS	Impact LU-2, pp. 3.12-14 – 3.12-15	Yes	NA	NA	LTS	No	Yes

[1]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]	☐	☐	☐

Discussion

Impact LU-1

Vegetation treatment activities would occur within the project site, which is located in unincorporated Humboldt County. The project area is primarily comprised of private agricultural and timber- preserve designated lands (24,818 acres) and rural residential/agriculture parcels, (9,159 acres). The project area also includes small areas of land zoned for manufactured homes and multi-family residential (total of around 195 acres). Approximately 1,550 acres of the site are designated as Public Lands, and were part of the Schools Land Grant program.

Much of the residential land uses within the potential treatment areas are located in the unincorporated communities of Fruitland (along Elk Creek and Dyerville Loop Roads), Harris, and New Harris, and along Alderpoint Road. Residences also are scattered along parcels fronting the major roadways in the Study Area. The off-site communities of Alderpoint and Fort Seward, along the Main Stem of the Eel River may be affected by Project activities, as well as the off-site communities of Weott, Myers Flat, Miranda, Phillipsville, Redway, Benbow, Piercy, and Garberville, along US 101 and the South Fork of the Eel River. Off-site land use impacts would be related to noise, air quality, and traffic, which are addressed in those sections of this PSA.

The potential for vegetation treatment activities to cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation was examined in the PEIR. This impact is within the scope of the PEIR because the treatment locations, types, and activities are consistent with those analyzed in the PEIR. No conflicts with a land use plan or policy would occur because the HCRCD would adhere to SPR AD-3, 4, 6, 7, 8, which apply to direct land use conflicts, as well as SPRs NOI-6 and REC-1, and other SPRs addressed in the Noise and Air Quality discussions, which would be applicable to indirect and off-site land use conflicts resulting from project implementation. The proposed treatments have been designed to be consistent with Humboldt County General Plan Land Use policies and Zoning Ordinance.

The applicant has consulted with Humboldt County Planning Department staff, who has concurred that Humboldt County would have no permitting requirements (Trevor Estlow pers. comm. March 26, 2025).

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

Impact LU-2

Crews implementing the proposed project would typically range 4-10 personnel, with up to 40 people for prescribed burns, and up to three crews would be working simultaneously to implement the proposed project. The potential for treatments to result in substantial population growth as a result of increases in demand for employees was examined in the PEIR. Impacts associated with short-term increases in the demand for workers during implementation of the proposed project are within the scope of the PEIR because the number of workers required for implementation of treatments is generally consistent with the crew size analyzed in the PEIR for the types of treatments proposed (i.e., two to 10 workers for mechanical treatments, and up to 10 workers for manual treatments). Although the HCRCD would temporarily contract workers to implement the proposed project, it is expected that this demand could be met by new workers who are existing residents in the vicinity of where treatments would occur. Thus, implementation of the proposed project would not induce substantial unplanned population growth to cause a need for new housing and other infrastructure. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Due to the short-term nature of project activities, it is unlikely that anyone would move to the area due to temporary employment for this project. Thus, implementation of the proposed project would not induce substantial unplanned population growth to cause a need for new housing and other infrastructure. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Land Use and Planning, Population and Housing Impacts

The proposed treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.12.1, "Environmental Setting," and Section 3.12.2, "Regulatory Setting," in Volume II of the Final PEIR). The HCRCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant

impacts not addressed in the PEIR. Therefore, no new impact related to land use and planning or population and housing would occur that is not covered in the PEIR.

5.12. 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 (or Helicopter-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]	☐	☐	☐

Discussion

Sound is created when vibrating objects produce pressure variations that move rapidly outward into the surrounding air. The more powerful the pressure variations, the louder the sound perceived by a listener. The decibel (dB) is the standard measure of loudness relative to the human threshold of perception. Noise is a sound or series of sounds that are intrusive, objectionable or disruptive to daily life. Many factors influence how a sound is perceived and whether it is considered disturbing to a listener; these include the physical characteristics of sound (e.g., loudness, pitch, duration, etc.) and other factors relating to the situation of the listener (e.g., the time of day when it occurs, the acuity of a listener's hearing, the activity of the listener during exposure, etc.). Environmental noise has many documented undesirable effects on human health and welfare, either psychological (e.g., annoyance and speech interference) or physiological (e.g., hearing impairment and sleep disturbance).

A sound-level meter (SLM) applies human hearing sensitivity factors (determined by laboratory measurements) to each frequency component of the sound being measured before averaging them. This is called "A" weighting, and the average pressure level measured by an SLM in this mode is called the A-weighted sound level (dBA). The average A-weighted sound pressure level measured by an SLM during any specified measurement period is called the equivalent sound level (Leq). To describe the time-varying character of environmental noise, statistical noise descriptors (L10, L50, L90, etc.) are extracted from the measurement data to define the A-weighted noise levels equaled or exceeded during 10%, 50%, 90% etc., respectively, over the duration of the measurement period.

The Humboldt County General Plan, Chapter 13 Noise Element (County Noise Element) identifies the major noise sources in the County (i.e., state highways, high-volume county roads, airports, and prominent stationary sources [e.g., industrial facilities, agricultural operations, etc.]), and the goals, policies and standards for their control. The following are the General Plan's goals and policies most applicable to the noise-generating characteristics of the proposed project (underline added to show special applicability to the proposed project):

- Goal N-G1: Excessive Noise. [Maintain] A quiet and healthful environment with limited disagreeable noise.
- Policy N-P1: Minimize Noise from Stationary and Mobile Sources. Minimize stationary noise sources and noise emanating from temporary activities by applying appropriate standards for average and short-term noise levels during permit review and subsequent monitoring.
- Policy NP-4: Protection from Excessive Noise. Protect persons from existing or future excessive levels of noise which interfere with sleep, communication, relaxation, health or legally permitted use of property.

The County Noise Element evaluates noise impacts on/from development projects based on a comparison with its noise compatibility standards (i.e., Noise Element Table 13-C), requiring for single-family residential (the most noise-sensitive of its land use categories) that ideally outdoor 24-hour average noise levels should not exceed 55 dBA, and interior maximum noise levels (Lmax) should not exceed 45 dBA. Since a standard construction wood frame house reduces noise transmission by 15dBA (according to the Noise Element), the interior Lmax for residences should not exceed 45dBA if the maximum exterior Lmax for residences is 60dBA or less; if exterior Lmax is greater, additional acoustic insulation would be required.

The County Noise Element also sets appropriate outdoor standards for Lmax that vary with the type of land use and time of day. In low-density residential areas, this standard is set at 65 dBA (daytime, 6 am to 10 pm) to avoid the perception of nuisance, such as interfering with normal conversation or disturbing sleep (i.e., noise levels above 66 dBA requires raised voices to be heard at a distance of three feet, while indoor noise levels can disturb sleep beginning in the 50-60 dBA range).

Impact NOI-1

The Project includes vegetation removal treatments on up to 20,000 acres of ridge lands located in the southern Humboldt County and southwestern Trinity County. Proposed treatments include mechanical and manual forest thinning and prescribed burning. This would require the intensive use of noise-generating equipment (e.g., heavy-duty, diesel-powered, tracked equipment for vegetation removal/transport, gasoline-powered chainsaws, etc.) in the various areas proposed for treatment during the project's ten-year implementation period. Thus, it has the potential for substantial short-term increases in local ambient noise levels in the noise-sensitive areas in and around the few

small, rural communities in the Study Area (an impact category identified and generically evaluated in the CalVTP PEIR).

The project vegetation treatment areas were visited January 15-17, 2025 when the locations of existing noise-sensitive receptors were observed in the context of the surrounding treatment area locations, and short-term, daytime noise measurements were made at three selected locations, as identified in **Table 9**.

The population density of the Study Area is very low and there are no major noise sources therein (e.g., highways, high-volume roads, rail lines, airports, industrial facilities, etc., as defined by the County Noise Element). Motor vehicle pass-bys and a few small aircraft overflights were the only notable local influences on ambient noise levels. The measurements show a normal baseline mid-weekday ambient noise level ranging in the 40s dBA.

All of the project treatment areas are on/near the ridgelines of the hills a few miles east of Highway 101. Most of the many parcels upon which varied project work would proceed sequentially over ten years are more than a mile distant from the larger local town centers where most of the local noise-sensitive receptors are. Project plans specify the type of vegetation treatment work and the associated equipment types/numbers/use times for each treatment type. These data were used with the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) to estimate their noise levels at various distances from the equipment work locations, as shown in **Table 10**.

The modeled equipment noise levels presented in the table are color-coded to reference County Noise Element standards (i.e., red entries show project noise levels that exceed the County 65 dBA Lmax limit to avoid undue nuisance in residential areas; green entries show project noise levels that are within local normal 40-50 dBA daytime ambient conditions).

In general, project equipment-intensive work types (i.e., those using heavy-duty, diesel-powered equipment and/or chainsaws) would need to be 500 feet or closer to noise-sensitive receptors for there to be a substantial chance of exceeding the County's 65 dBA Lmax nuisance standard – and most project treatment activities would be a mile or more from most local noise-sensitive receptors. Similarly, noise from all work types taking place on project parcels at least a mile from noise-sensitive receptors would have declined to within normal local ambient levels at that distance or greater. Thus, for most of the project work types and the locations where they would occur, the great majority of local noise-sensitive receptors would not be exposed to substantial noise nuisance and/or to noise levels exceeding existing ambient conditions. For any receptors experiencing nuisance or above-ambient levels under limited worst-case conditions, the impact duration would be short as vegetation treatment work moves to more distant parcels over the entire project area over the project's ten-year duration.

Table 9. Noise Measurement Data Summary with Survey Observations

Measurement Location/Time	L_{min}	L_{90}	L_{eq}	L_{10}	L_{max}	Observations during Measurement Period
Location #1 Meyer's Flat @ Sequoia Road (#82) 12:48 pm – 12:58 pm, 1/16/25	35.2	35.8	41.5	39.7	62.4	Occasional noise peaks in the 50s and 60s from cars on Meyer's Flat Road and light aircraft overflights.

Location #2 Dyerville Loop Road @ Barnum Road 1:41 pm – 1:51 pm 1/16/25	27.5	29.4	41.6	41.4	60.9	Occasional noise peaks in the 50s and 60s from cars on Dyerville Road and light aircraft overflights.
Location #3 Harris @ Bell Springs Road 12:27 pm – 12:37 pm, 1/17/25	31.9	32.5	48.3	41.3	68.7	Occasional noise peaks in the 50s and 60s from cars on Bell Springs Road and light aircraft overflights.
The **decibel (dB)** is the standard measure of a sound's loudness relative to the human threshold of perception. Decibels are said to be **A–weighted (dBA)** when corrections are made to a sound's frequency components during a measurement to reflect the known, varying sensitivity of the human ear to different frequencies. The **Equivalent Sound Level (L_{eq})** is a constant sound level that carries the same sound energy as the actual time–varying sound over the measurement period. **Statistical Sound Levels – L_{min}, L_{90}, L_{10} and L_{max}** – are the minimum sound level, the sound level exceeded 90% of the time, the sound level exceeded 10% of the time and the maximum sound level, respectively; all as recorded during the 10-minute measurement periods.						

Table 10. RCNM Modeled Equipment Noise Levels Associated with Project Vegetation Treatments

Treatment Activity	Total Acres	Work Specifications	Equipment Required	RCNM Model Equipment Noise Level (dBA at X feet from work activity locus)							
				50	100	200	400	800	1320 (1/4 mile)	2640 (1/2 mile)	5280 (1 mile)
Mechanical Treatment	18,091	Mastication, chipping, brush raking, tilling, mowing, roller chopping, skidding, and piling, often combined with manual treatment and pile burning.	Chainsaw (6), CTL harvester, forwarder, 4x4 Truck	87.0	80.9	74.9	68.9	62.9	58.5	52.5	46.5
Manual Treatment	20,000	Hand thin, prune, and cut. Pile, lop, and scatter.	Excavator, Chainsaw (6); 4x4 Truck	84.7	78.7	72.7	66.6	60.6	56.3	54.4	44.2
Prescribed Fire (Pile Burn)	8,350	Place removed fuels in piles on site and burn fuel.	Chainsaw (6), 4x4 Truck	84.7	78.7	72.7	66.6	60.6	56.3	50.2	44.2
Prescribed Fire (Broadcast Burn)	20,000	Burn understory within timber or oak woodlands and grasslands with perimeter control line.	Chainsaw (6), 4x4 Truck	84.7	78.7	72.7	66.6	60.6	56.3	50.2	44.2

Although Humboldt County does not limit the hours/days of work with heavy equipment, SPR NOI-1 would limit such use to daytime hours. In addition, several other SPRs would be implemented, including AD-3 and NOI-2 through NOI-6. This impact is within the scope of the PEIR, because the number/types/duration of equipment for the

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

Impact NOI-2

The proposed project's vegetation removal/restoration activity may involve occasional large trucks hauling logs on local roads. The haul trucks would pass by residential receptors along local roads. The potential for a substantial short-term increase in single-event noise levels from trucks was examined in the PEIR. This impact is within the scope of the PEIR because the number and types of equipment proposed are consistent with those analyzed in the PEIR. The haul trips associated with the proposed treatments would occur during daytime hours, which avoids the potential for sleep disturbance to residents during the more noise-sensitive evening and nighttime hours. SPR NOI-1 would be applicable to the proposed project. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Noise Impacts

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

5.13. 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	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

Impact REC-1

The project site is mostly on privately owned, agriculturally-zoned land that is not used for, or publicly available for, recreational activities. However, the project site includes a large (approximately 1550-acre) publicly-owned parcel, and parts of the site are adjacent to or near Humboldt Redwoods State Park. The park includes campsites, hiking trails, picnic areas, and other recreational facilities. In addition, there are several private day use areas and resorts along US 101 and the South Fork Eel River that may be affected by project activities. Much of the economic activity in the Study Area is associated with tourism and recreation. In addition, a private camp, Redwood Area Camp, is located on the north side of Mail Ridge, just off of Dyerville Loop Road. As such, it is possible that smoke from prescribed burns and pile burning, and noise from mechanical treatment would be noticeable at that camp during treatment activities.

The potential for treatment activities to disrupt recreational activities was analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.14.3, page 6-7). The temporary disruption of recreational activities during project implementation is within the scope of the activities and impacts addressed in the PEIR because the treatments, associated equipment and duration of use is consistent with those analyzed in the PEIR. Maintaining consistency with local plans, policies, and ordinances (SPR AD-3) would reduce the risk of disruption to recreational activities within the project area.

New Recreation Impacts

The proposed treatment is consistent with the treatment types and activities addressed in the PEIR. The project proponent has considered all site-specific characteristics and determined they are consistent with the regulatory and environmental setting conditions presented in the PEIR (CalVTP Final PEIR Volume II 3.14.1 and 3.14.2). There are no changed circumstances that would lead to new significant impacts not addressed in the PEIR. Therefore, no new impact related to recreation would occur that is not discussed in the PEIR.

5.14. 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, HYD-2, TRAN-1	NA	LTS	No	Yes
Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses	LTS	Impact TRAN-2 pp. 3.15-10 – 3.15-11	Yes	AD-3, TRAN-1	NA	LTS	No	Yes
Impact TRAN-3: Result in a Net Increase in VMT for the Proposed CalVTP	PSU	Impact TRAN-3 pp. 3.15-11 – 3.15-13	Yes	None	None	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 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]	☐	☐	☐

Discussion

Impact TRAN-1

Vegetation treatments would temporarily increase vehicular traffic along several roads in the project area, including Dyerville Loop Road, Bell Springs Road, Island Mountain Road, Island Mountain Road, Alderpoint Road, Fort Seward Road, and Elk Creek Road. The potential for a temporary increase in traffic to conflict with a program, plan, ordinance, or policy addressing roadway facilities or prolonged road closures was examined in the PEIR. The proposed treatments would be short-term, and temporary increases in traffic related to treatments are within the scope of the PEIR because the treatment duration and limited number of vehicles required (e.g., equipment transport and crew vehicles for crew members) are consistent with those analyzed in the PEIR. In addition, the proposed treatments would not all occur concurrently, and increases in vehicle trips associated with the treatments would be

dispersed on multiple roadways. One lane traffic with a County Encroachment permit may be required during fuels reduction along public roads. Cones and signage would be used and flaggers and/or automated lights would be used if necessary,

SPRs that would be applicable to the proposed project are AD-3, HYD-2, and TRAN-1. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact TRAN-2

Vegetation treatments would not require the construction or alteration of any roadways. However, the proposed treatments would require the transportation of heavy equipment along Elk Creek Road, Dyerville Loop Road, Alderpoint Road, and other local roadways. Equipment also would use ranch access roads, which could create increased transportation hazards. As described above, one lane traffic with a County Encroachment permit may be used during fuels reduction along public roads. Cones and signage would be used and flaggers and/or automated lights would be used, if necessary. The potential for the hauling of machinery to remote treatment areas was examined in the PEIR. This impact is within the scope of the activities and impacts addressed in the PEIR because the quantity and types of equipment proposed for use that would require transport to treatment areas are the same as those analyzed in the PEIR. In addition, the transport of equipment would be infrequent and dispersed on multiple roadways, occurring at the start and the end of treatment activities. SPRs that would be applicable to the proposed project are AD-3, HYD-2, and TRAN-1. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact TRAN-3

Treatments could temporarily increase vehicle miles traveled (VMT) above baseline conditions because the proposed project would require vehicle trips to transport crew members and equipment to the treatment areas. This impact was identified as potentially significant and unavoidable in the PEIR because implementation of the CalVTP would result in a net increase in VMT. However, as noted under Impact TRAN-3 in the PEIR, individual vegetation treatment projects under the CalVTP are reasonably expected to generate fewer than 110 trips per day, which would cause a less-than-significant transportation impact for specific later activities, as described in the Technical Advisory on Evaluating Transportation Impacts published by the Governor's Office of Planning and Research (OPR 2018). Burning, manual treatment, and mechanical treatments under the proposed project would typically require crews of 4-10 personnel, with up to 40 people for prescribed burns. Up to three treatments would be implemented simultaneously. Even if multiple treatments occur simultaneously, the crew sizes are sufficiently small such that the total increase in VMT would not exceed 110 trips per day. In addition, the increase in vehicle trips would be temporary and dispersed to multiple roadways. A temporary increase in VMT is within the scope of the activities and impacts addressed in the PEIR because the number and duration of increased vehicle trips are consistent with those analyzed in the PEIR. This impact would be less than significant, and MM AQ-1 would not be required for this impact of the proposed project. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Transportation Impacts

The proposed treatments are mostly within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has considered the site-specific characteristics of the

proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.15.1, "Environmental Setting," and Section 3.15.2, "Regulatory Setting," in Volume II of the Final PEIR). The HCRCD has also determined that the circumstances under which the proposed treatment project would be undertaken are also consistent with those considered in the PEIR. No changed circumstances would give rise to new significant impacts not addressed in the PEIR. Therefore, no new impact related to transportation would occur that is not covered in the PEIR.

5.15. 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	SPR AQ-4	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	SPR UTIL-1	NA	LTS	No	Yes
Impact UTIL-3: Comply with Federal, State, and Local Management and Reduction Goals, Statutes, and Regulations Related to Solid Waste	LTS	Section 3.16.2 pp. 3.16-6 – 3.16-7; Impact UTIL-2 p. 3.16-12	Yes	SPR 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]	☐	☐	☐

Discussion

Impact UTIL-1

Water may be required to implement the proposed project to minimize dust if excessive dust is created through the use of unpaved roads, or to remove visible dust or mud that gets tracked out onto public paved roadways, pursuant to SPR AQ-4. Water also would be required by water tenders and other equipment for fire suppression for pile burning. The potential increase in water demand as a result of treatment activities was examined in the PEIR. The most water-intensive activities described in the PEIR would be providing on-site water for pile burning and during vegetation removal within nonshaded fuel breaks. This impact is within the scope of the impacts addressed in the PEIR because the treatment types and activities are consistent with those included in the PEIR and the amount of water required during project implementation is consistent with that analyzed in the PEIR. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact UTIL-2

Vegetation treatments would generate biomass as a result of vegetation removal within the treatment areas. Biomass generated by mechanical and manual treatments would be disposed of by chipping, mulching, or lopping and scattering within treatment areas, and/or by pile burning. Burnt residual biomass would remain on-site. 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. For the proposed treatment project, no biomass would be hauled off-site for disposal; therefore, there is no potential to exceed the capacity of existing infrastructure, and this impact does not apply to the proposed project. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact UTIL-3

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

New Impacts to Public Services, Utilities and Service Systems

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

5.16. 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, AQ-3, HAZ-2, 3, and-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	AD-3, AQ-3, HAZ 2, 3, and 4; GEO-3,4,5, 8; HYD- 1, 2, 4,6	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 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]	☐	☐	☐

Discussion

Impact WIL-1

Vegetation treatments would include the use of prescribed burning, pile burns, and heavy equipment, which pose a risk of accidental fire ignition. The potential increase in exposure to wildfire during implementation of treatments was examined in the PEIR. Increased wildfire risk associated with the use of prescribed burning, pile burns and heavy equipment in vegetated areas is within the scope of the PEIR, because the types of burns, equipment and treatment duration of the proposed project are consistent with those analyzed in the PEIR.

As described in the PEIR (Section 3.17.1) implementing a prescribed burn requires extensive planning, including the preparation of prescription burn plans, SMPs, site-specific weather forecasting, public notifications, safety considerations, and ultimately favorable weather conditions so a burn can occur on a given day. Prior to implementing a prescribed burn, fire containment lines are established by clearing vegetation surrounding the designated burn area to help prevent the accidental escape of fire. During a prescribed burn, fire engines, large water storage containers, and safety equipment deemed necessary by the Incident Commander (e.g., one Pulaski per

vehicle) are on-site. One crew member is assigned to report weather to the Incident Commander every 30 minutes (or as deemed necessary by the Incident Commander) to make sure the burn is staying within its prescription. If conditions ever deviate from the burn plan (also called "going out of prescription"), the burn is rescheduled, and crews transition from active burning activities to patrolling and extinguishing. In the event a prescribed burn goes beyond the perimeter of its planned area, hand crews and fire engines are on-site to control the escape. In the event of a large escape (which is rare), helicopters and air tankers are on standby and may be called in to assist with regaining control and other CAL FIRE firefighting resources can be mobilized. Therefore, given the extensive planning and preparation before a prescribed burn, active monitoring and maintenance during a burn, and implementation of safety protocols, prescription burning would not substantially exacerbate fire risk or result in the uncontrolled spread of wildfire.

In the long term, implementation of the treatment activities under the Project would reduce wildfire risk. Fuel reduction activities in the WUI would consist of strategic removal of vegetation to prevent or slow the spread of wildfire between structures and wildlands and vice versa. Fuel breaks would create zones of vegetation removal and ongoing maintenance, to help passively interrupt the path of a fire or slow its progress and to support fire suppression by providing responders with a staging area and access to remote locations for fire control actions. Ecological restoration would focus on restoring ecosystem processes, conditions, and resiliency by modifying uncharacteristic wildland fuel conditions to reflect historic vegetative composition, structure, and habitat values. Therefore, to the extent the treatments reduce wildfire risk, implementation of the proposed Project would have a beneficial impact related to wildfire over the long-term and would not exacerbate fire risk. This impact would be less than significant. SPRs that would be applicable to the proposed project are AD-3, AQ-3, HAZ-2, HAZ-3, and HAZ-4. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact WIL-2

The proposed project would implement prescribed burning and pile burning, which, if on slopes, could result in postfire flooding or landslides. However, all project burns will be on level or gently sloping lands, which would minimize this potential impact. Those risks would be further reduced by the proposed burn plan (SPR AQ-3) as well as erosion control measures include in the Hydrology and Geology SPRs. Spill control measures included in the Hazardous Materials SPRs also would reduce the risk of accidental fires.

The project does not include new housing, nor would it result in population growth, thereby potentially exposing more people to postfire risks of flooding or landslides. Furthermore, because the treatments reduce wildfire risk, they would also decrease post wildfire landslide and flooding risk in areas that could otherwise burn in a high-severity wildfire without treatment. SPRs that would be applicable to the proposed project are AD-3, AQ-3, HAZ-2, 3, and 4, GEO-3, 4,5, and 8; HYD- 1, 2, 4, and 6. Therefore, this impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Impacts to Wildfire

The proposed treatments are mostly within the CalVTP treatable landscape and are consistent with the treatment types and activities considered in the CalVTP PEIR. The HCRCD has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Section 3.17.1, "Environmental Setting," and Section 3.17.2,

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

6. LIST OF PREPARERS

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ATTACHMENT A – STANDARD PROJECT REQUIREMENTS AND MITIGATION MEASURES CHECKLIST

Instructions: Review the standard project requirements and mitigation measures and verify that those that are applicable will be implemented. Provide information for each column as follows:

- 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
Standard Project Requirements (SPRs)				
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.	**Y**	**Prior to treatment**	**CAL FIRE**	**HCRCD**
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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
SPR AD-4 Public Notifications for Prescribed Burning: At least 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 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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
treatment maintenance. Prescribed burning is subject to the additional notification requirements of SPR AD-4.				
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); ▶ 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). This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	**Y**	**Prior to, during, and post-treatment**	**HCRCD**	**HCRCD**
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	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.				
SPR AD-9: Obtain a Coastal Development Permit for Proposed Treatment Within the Coastal Zone Where Required. When planning a treatment project within the Coastal Zone, the project proponent will contact the local Coastal Commission district office, or applicable local government to determine if the project area is within the jurisdiction of the Coastal Commission, a local government with a certified Local Coastal Program (LCP), or both. All treatment projects in the Coastal Zone will be reviewed by the local Coastal Commission district office or local government with a certified LCP (in consultation with the local Coastal Commission district office regarding whether a Coastal Development Permit (CDP) is required). If a CDP is required, the treatment project will be designed to meet the following conditions: i. The treatment project will be designed in compliance with applicable provisions of the Coastal Act that provide substantive performance standards for the protection of potentially affected coastal resources, if the treatment activity will occur within the original jurisdiction of the Commission or an area of a local coastal government without a certified LCP; and ii. The treatment project will be designed in compliance with the applicable provisions of the certified LCP, specifically the substantive performance standards for the protection of potentially affected coastal resources, if the treatment activity will occur within the jurisdiction of a local coastal government with a certified LCP. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	**N**	**NA**	**NA**	**NA**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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. Staging of project equipment at the old airstrip area, which currently houses a logging-related operation and equipment, would not adversely affect views compared with existing conditions. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Y**	**During treatment**	**HCRCD, CAL FIRE**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.	**Y**	**During treatment**	**HCRCD, CAL FIRE**	**HCRCD**
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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
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.	**Y** . *Note. Humboldt County Prescribed Burn Association Template or other plan comparable to the CAL FIRE template may be used instead*	**Prior to treatment**	**CAL FIRE, HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD, CAL FIRE**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ 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.				
SPR AQ-5 Avoid Naturally Occurring Asbestos: The project proponent will avoid ground-disturbing treatment activities in areas identified as likely to contain 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.	**N**	**NA**	**NA**	**NA**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
SPR CUL-2 Contact Geographically Affiliated Native American Tribes: The project proponent will obtain the latest Native American Heritage Commission (NAHC) provided Native Americans Contact List. Using the appropriate Native Americans Contact List, the project proponent will notify the California Native American Tribes in the counties where the treatment activity is located. The notification will contain the following: ▶ A written description of the treatment location and boundaries. ▶ Brief narrative of the treatment objectives. ▶ A description of the activities used (e.g., prescribed burning, mastication) and associated acreages. ▶ A map of the treatment area at a sufficient scale to indicate the spatial extent of activities. ▶ A request for information regarding potential impacts to cultural resources from the proposed treatment.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ 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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
SPR CUL-4 Archaeological Surveys: The project proponent will coordinate with an archaeologically-trained resource professional and/or qualified archaeologist to conduct a site-specific survey of the treatment area. The survey methodology (e.g., pedestrian survey, subsurface investigation) depends on whether the area has a low, moderate, or high sensitivity for resources, which is based on whether the records search, pre-field research, and/or Native American consultation identifies archaeological or historical resources near or within the treatment area. A survey report will be completed for every cultural resource survey completed. The specific requirements will comply with the applicable state or local agency procedures. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
SPR CUL-7 Avoid Built Historical Resources: If the records search identifies built historical resources, as defined in Section 15064.5 of the State CEQA Guidelines, the project proponent will avoid these resources. Within a buffer of 100 feet of the built historical resource, there will be no prescribed burning or mechanical treatment activities. Buffers less than 100 feet for built historical resources will only be used after consultation with and receipt of written approval from a qualified archaeologist. If the records search does not identify known historical resources in the treatment area, but structures (i.e., buildings, bridges, roadways) over 50 years old that have not been evaluated for historic significance are present in the treatment area, they will similarly be avoided. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Y**	**During treatment**	**HCRCD, CAL FIRE**	**HCRCD**
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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
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 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:	**Y** A data review and reconnaissance-level survey have been conducted as part of this PSA. See Biological Resources section of PSA for additional details on database results and site survey.	**Prior to treatment**	**HCRCD**	**HCRCD**
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	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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 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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
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:	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

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.				
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 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	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**

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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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 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) unless	**N** Type conversion for chapparal and coastal sage scrub is not being proposed, and therefore no measures are recommended for that habitat type.	**NA**	**NA**	**NA**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.				
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; ▶ 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;	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ 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, 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.	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**
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	**N**	**N/A**	**N/A**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
Local Coastal Program (LCP) (as applicable), identify the habitat types and species present to determine if the area qualifies as an Environmentally Sensitive Habitat Area (ESHA). If the area is an ESHA, the treatment project may be allowed pursuant to this PEIR, if it meets the following conditions. If a project requires a CDP by the Coastal Commission or a local government with a certified LCP (as applicable), the CDP approval may require modification to these conditions to further avoid and minimize impacts: ▶ The treatment will be designed, in compliance with the Coastal Act or LCP if a site is within a certified LCP area, to protect the habitat function of the affected ESHA, protect habitat values, and prevent loss or type conversion of habitat and vegetation types that define the ESHA, or loss of special-status species that inhabit the ESHA. ▶ Treatment actions will be limited to eradication or control of invasive plants, removal of uncharacteristic fuel loads (e.g., removing dead, diseased, or dying vegetation), trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the vegetation types present in the ESHA. ▶ A qualified biologist or RPF familiar with the ecology of the treatment area will monitor all treatment activities in ESHAs. ▶ Appropriate no-disturbance buffers will be developed in compliance with the Coastal Act or relevant LCP policies for treatment activities in the vicinity of ESHAs to avoid adverse direct and indirect effects to ESHAs. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Not in Coastal Zone			
Invasive Plants and Wildlife				
SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife. The project proponent will take the following actions to prevent the spread of invasive plants, noxious weeds, and invasive wildlife (e.g., New Zealand mudsnail): ▶ clean clothing, footwear, and equipment used during treatments of soil, seeds, vegetative matter, other debris or seed-bearing material, or water (e.g., rivers, streams, creeks, lakes) before entering the treatment area or when leaving an area with infestations of invasive plants, noxious weeds, or invasive wildlife; ▶ for all heavy equipment and vehicles traveling off road, pressure wash, if feasible, or otherwise appropriately decontaminate equipment at a designated weed-cleaning station prior to entering the treatment area from an area with infestations of invasive plants, noxious weeds, or invasive wildlife. Anti-fungal wash agents will be specified if the equipment has been exposed to any pathogen that could affect native species; ▶ inspect all heavy equipment, vehicles, tools, or other treatment-related materials for sand, mud, or other signs that weed seeds or propagules could be present prior to use in the treatment area. If the equipment is not clean, the qualified RPF or biological technician will deny entry to the work areas; ▶ stage equipment in areas free of invasive plant infestations unless there are no uninfested areas present within a reasonable proximity to the treatment area; ▶ identify significant infestations of invasive plant species (i.e., those rated as invasive by Cal-IPC or designated as noxious weeds by California Department of Food and Agriculture) during reconnaissance-level surveys and target them for removal during treatment activities. Treatment methods will be selected based	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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. 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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
SPR BIO-12. Protect Common Nesting Birds, Including Raptors. The project proponent will schedule treatment activities to avoid the active nesting season of common native bird species, including raptors, that could be present within or adjacent to the treatment site, if feasible. Common native birds are species not otherwise treated as special status in the CalVTP PEIR. The active nesting season will be defined by the qualified RPF or biologist. If active nesting season avoidance is not feasible, a qualified RPF or biologist will conduct a survey for common nesting birds, including raptors. Existing records (e.g., CNDDB, eBird database, State Wildlife Action Plan) should be reviewed in advance of the survey to 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).	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
If an active nest is observed (i.e., presence of eggs and/or chicks) or determined to likely be present based on nesting bird behavior, the project proponent will implement a feasible strategy to avoid disturbance of active nests, which may include, but is not limited to, one or more of the following: ▶ **Establish Buffer.** The project proponent will establish a temporary, species-appropriate buffer around the nest sufficient to reasonably expect that breeding would not be disrupted. Treatment activities will be implemented outside of the buffer. The buffer location will be determined by a qualified RPF or biologist. Factors to be considered for determining buffer location will include: presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and expected treatment activities. Nests of common birds within the buffer need not be monitored during treatment. However, buffers will be maintained until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. ▶ **Modify Treatment.** The project proponent will modify the treatment in the vicinity of an active nest to avoid disturbance of active nests (e.g., by implementing manual treatment methods, rather than mechanical treatment methods). Treatment modifications will be determined by the project proponent in coordination with the qualified RPF or biologist. ▶ **Defer Treatment.** The project proponent will defer the timing of treatment in the portion(s) of the treatment site that could disturb the active nest. If this avoidance strategy is implemented, treatment activity will not commence until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. Feasible actions will be taken by the project proponent to avoid loss of common native bird nests. The feasibility of implementing the avoidance strategies will be determined by the project proponent based on whether implementation of this SPR will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. Considerations may include limitations on the presence of environmental and atmospheric conditions necessary to execute treatment prescriptions (e.g., the limited seasonal windows during which prescribed burning can occur when vegetation moisture, weather, wind, and other physical conditions are suitable). If it is infeasible to avoid loss of common bird nests (not including raptor nests), the project proponent will document the reasons implementation of the avoidance strategies is infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). The following avoidance strategies may also be considered together with or in lieu of other actions for implementation by a project proponent to avoid disturbance to raptor nests: ▶ **Monitor Active Raptor Nest During Treatment**. A qualified RPF, biologist, or biological technician will monitor an active raptor nest during treatment activities to identify signs of agitation, nest defense, or other behaviors that signal disturbance of the active nest is likely (e.g., standing up from a brooding position, flying off the nest). If breeding raptors are showing signs of nest disturbance, one of the other avoidance strategies (establish buffer, modify				

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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.	**Y**	**During and post-treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During and post-treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**

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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**N** .	**NA**	**NA**	**NA**
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 removed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.				
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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
SPR HAZ-8 Minimize Herbicide Drift to Public Areas: The project proponent will employ the following herbicide application parameters during herbicide application to minimize drift into public areas: ▶ application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative); ▶ spray nozzles will be configured to produce the largest appropriate droplet size to minimize drift;	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ 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.				
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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
Hydrology and Water Quality Standard Project Requirements				
SPR HYD-1 Comply with Water Quality Regulations: Project proponents must also conduct proposed vegetation treatments in conformance with appropriate RWQCB timber, vegetation and land disturbance related Waste Discharge Requirements (WDRs) and/or related Conditional Waivers of Waste Discharge Requirements (Waivers), and appropriate Basin Plan Prohibitions. Where these regulatory requirements differ, the most restrictive will apply. If applicable, this includes compliance with the conditions of general waste discharge requirements (WDR) and waste discharge requirement waivers for timber or silviculture activities where these waivers are designed to apply to non-commercial fuel reduction and forest health projects. In general, WDR and Waivers of waste discharge requirements for fuel reduction and forest health activities require that wastes, including but not limited to petroleum products, soil, silt, sand, clay, rock, felled trees, slash, sawdust, bark, ash, and pesticides must not be discharged to surface waters or placed where it may be carried into surface waters; and that Water Board staff must be allowed reasonable access to the property in order to determine compliance with the waiver conditions. The specifications for each WDR and Waiver vary by region. Regions 2 (San Francisco Bay), 4 (Los Angeles), 8 (Santa Ana), and 7 (Colorado River) are highly urban or minimally forested and do not offer WDRs or Waivers for fuel reduction or vegetation management activities. The current applicable WDRs and Waivers for timber and vegetation management activities are included in Appendix HYD-1. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
SPR HYD-3 Water Quality Protections for Prescribed Herbivory: The project proponent will include the following water quality protections for all prescribed herbivory treatments:	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

<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>

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.
</td><td></td><td></td><td></td><td></td></tr>
<tr><td>
SPR HYD-4 Identify and Protect Watercourse and Lake Protection Zones: The project proponent will establish Watercourse and Lake Protection Zones (WLPZs) on either side of watercourses as defined in the table below, which is based on 14 CCR Section 916 .5 of the California Forest Practice Rules (February 2019 version). WLPZ's are classified based on the uses of the stream and the presence of aquatic life. Wider WLPZs are required for steep slopes.

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 non-fish 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 degradation of downstream beneficial uses of water. Determined on a site-specific basis.</td><td></td></tr>
<tr><td>30-50 % Slope</td><td>100</td><td>75</td><td></td></tr>
</table>
</td><td>Y</td><td>Prior to and during treatment</td><td>HCRCD</td><td>HCRCD</td></tr>
</table>

Standard Project Requirements				Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
>50 % Slope	150	100					

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

The following WLPZ protections will be applied for all treatments:

- Treatment activities with WLPZs will retain at least 75 percent surface cover and undisturbed are 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 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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.				
SPR HYD-5 Protect Non-Target Vegetation and Special-status Species from Herbicides: The project proponent will implement the following measures when applying herbicides: ▶ Locate herbicide mixing sites in areas devoid of vegetation and where there is no potential of a spill reaching non-target vegetation or a waterway. ▶ Use only herbicides labeled for use in aquatic environments when working in riparian habitats or other areas where there is a possibility the herbicide could come into direct contact with water. Only hand application of herbicides will be allowed in riparian habitats and only during low-flow periods or when seasonal streams are dry. ▶ No terrestrial or aquatic herbicides will be applied within WLPZs of Class I and II watercourses, if feasible. If this is not feasible, hand application of herbicides labeled for use in aquatic environments may be used within the WLPZ provided that the project proponent notifies the applicable regional water quality control board no fewer than 15 days prior to herbicide application. The feasibility of avoiding herbicide application within WLPZ of Class I and II watercourses will be determined by the project proponent and may be based on whether doing so will preclude achieving CalVTP program objectives, including, but not limited to, protection of vulnerable communities. The reasons for infeasibility will be documented in the PSA. ▶ No herbicides will be applied within a 50-foot buffer of ESA or CESA listed plant species or within 50 feet of dry vernal pools. ▶ For spray applications in and adjacent to habitats suitable for special-status species, use herbicides containing dye (registered for aquatic use by DPR, if warranted) to prevent overspray. ▶ Application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative); ▶ No herbicide will be applied during precipitation events or if precipitation is forecast 24 hours before or after project activities. This SPR applies to herbicide treatment activities and all treatment types, including treatment maintenance.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
Noise Standard Project Requirements				
SPR NOI-1 Limit Heavy Equipment Use to Daytime Hours: The project proponent will require that operation of heavy equipment associated with treatment activities (heavy off-road equipment, tools, and delivery of equipment and materials) will occur during daytime hours if such noise would be audible to receptors (e.g.,	**Y**	**During treatment**	**HCRCD**	

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.				
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**NA**	**NA**	**NA**
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.	**Y**	**During treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**NA**	**NA**	**NA**
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	**N**	**NA**	**NA**	**NA**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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.	No recreation areas would be closed by the proposed project treatment.			
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. 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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
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.	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
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	**N** This SPR does not apply to this	**NA**	**NA**	**NA**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
solid organic waste offsite, the Solid Organic Waste 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.	project because no biomass will be hauled off-site.			

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.	**N** No fuel breaks in public viewing locations are proposed as part of the project.	**NA**	**NA**	**NA**
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:	**Y**	**During treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ Diesel-powered off-road equipment used in construction will meet EPA's Tier 4 emission standards as defined in 40 CFR 1039 and comply with the exhaust emission test procedures and provisions of 40 CFR Parts 1065 and 1068. Tier 3 models can be used if a Tier 4 version of the equipment type is not yet produced by manufacturers. This measure can also be achieved by using battery-electric off-road equipment as it becomes available. Prior to implementation of treatment activities, the project proponent will demonstrate the ability to supply the compliant equipment. A copy of each unit's certified tier specification or model year specification and operating permit (if applicable) will be available upon request at the time of mobilization of each unit of equipment. ▶ Use renewable diesel fuel in diesel-powered construction equipment. Renewable diesel fuel must meet the following criteria: ▪ meet California's Low Carbon Fuel Standards and be certified by CARB Executive Officer; ▪ be hydrogenation-derived (reaction with hydrogen at high temperatures) from 100 percent biomass material (i.e., non-petroleum sources), such as animal fats and vegetables; ▪ contain no fatty acids or functionalized fatty acid esters; and ▪ have a chemical structure that is identical to petroleum-based diesel and complies with American Society for Testing and Materials D975 requirements for diesel fuels to ensure compatibility with all existing diesel engines. ▶ Electric- and gasoline-powered equipment will be substituted for diesel-powered equipment. ▶ Workers will be encouraged to carpool to work sites, and/or use public transportation for their commutes. ▶ Off-road equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NO_X and PM.				
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	Y	During treatment	HCRCD	HCRCD

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
DPR Primary Record forms (Form DPR 523) will be submitted to the appropriate regional information center.				
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. 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	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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 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	**Y**	**During treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
would be rendered unsuitable) or because the loss of special-status plants would substantially reduce the number or restrict the range of a special-status plant species. If the project proponent determines the impact on special-status plants would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status plants or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-1c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants would benefit from treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required.				
Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants If significant impacts on listed or non-listed special-status plants cannot feasibly be avoided as specified under the circumstances described under Mitigation Measures BIO-1a and 1b, the project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant impacts that require compensatory mitigation and describes the compensatory mitigation strategy being implemented and how unavoidable losses of special-status plants will be compensated. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. If the special-status plant taxa are listed under ESA or CESA, the plan will be submitted to CDFW and/or USFWS (as appropriate) for review and comment. The first priority for compensatory mitigation will be preserving and enhancing existing populations outside of the treatment area in perpetuity, or if that is not an option because existing populations that can be preserved in perpetuity are not available, one of the following mitigation options will be implemented by the project proponent instead: ▶ creating populations on mitigation sites outside of the treatment area through seed collection and dispersal (annual species) or transplantation (perennial species); ▶ purchasing mitigation credits from a CDFW- or USFWS-approved conservation or mitigation bank in sufficient quantities to offset the loss of occupied habitat; and ▶ if the affected special-status plants are not listed under ESA or CESA, compensatory mitigation may include restoring or enhancing degraded	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**

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. 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.				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities) If California Fully Protected Species or species listed under ESA or CESA are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid adverse effects to the species by implementing the following. <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> The project proponent will implement one of the following 2 measures to avoid mortality, injury, or disturbance of individuals: 1. Treatment will not be implemented within the occupied habitat. Any treatment activities outside occupied habitat will be a sufficient distance from the occupied habitat such that mortality, injury, or disturbance of the species will not occur, as determined by a qualified RPF or biologist using the most current and commonly-accepted science and considering published agency guidance; OR 2. Treatment will be implemented outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, CDFW and/or USFWS/NOAA Fisheries will be consulted to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species. ▶ 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	**Y**	**During treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained. ▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.				
Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) If other special-status wildlife species (i.e., species not listed under CESA or ESA or California Fully Protected, but meeting the definition of special status as stated in Section 3.6.1 of the 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 ▶ 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).	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
▶ No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified RPF or biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified RPF, biologist, or biological technician will be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in mortality, injury or disturbance to special-status species. ▶ For prescribed burning, the project proponent will implement the treatment outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, the qualified RPF or biologist will determine the period of time within which prescribed burning could occur that will avoid or minimize mortality, injury, or disturbance of the species. The project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate limited operating periods. <u>Maintain Habitat Function</u> ▶ For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following: ▪ While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. ▪ If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that special-status wildlife with specific requirements for high canopy cover (e.g., northern goshawk, Sierra Nevada snowshoe hare) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted) such that the habitat function is maintained. ▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. The qualified				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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 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	**N** The biological surveys found no need for compensatory mitigation. See Biological Resources section of PSA.	**NA**	**NA**	**NA**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
2. Restoring or enhancing existing habitat within the treatment area or outside of the treatment area (including decommissioning roads, adding perching structures, removing existing perching structures, or removing existing movement barriers or other existing features that are adversely affecting the species). The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanisms for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat. Review requirements are as follows: ▶ The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. ▶ For species listed under ESA or CESA or a California Fully Protected Species, the project proponent will submit the mitigation plan to CDFW and/or USFWS/NOAA Fisheries for review and comment. ▶ For other special-status wildlife species the project proponent may consult with CDFW and/or USFWS regarding the availability and applicability of compensatory mitigation and other related technical information. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit), if these requirements are equally or more effective than the mitigation identified above.				
Mitigation Measure BIO-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	**N** The project is located outside of the VELB range.	**N/A**	**N/A**	**N/A**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity
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 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.	**Initial Treatment: N**			

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/ Monitoring Entity

- 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 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' (*Castilleja exserta*)

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

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. ▶ 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	**N** No habitat for special-status beetles, flies, grasshoppers, or snails exists on the treatment areas	**NA**	**NA**	**NA**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
deemed suitable by a qualified RPF or biologist with familiarity of the species. If the project proponent cannot implement the measures above to avoid mortality, injury or disturbance to listed beetles, flies, grasshoppers, and snails, or degradation of suitable habitat such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.				
Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees (All Treatment Activities) If special-status bumble bees are identified as occurring during review and surveys under SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, or if suitable habitat for special-status bumble bees is identified during review and surveys under SPR BIO-1 (e.g., wet meadow, forest meadow, riparian, grassland, or coastal scrub habitat containing sufficient floral resources within the range of the species), then the project proponent will implement the following measures, as feasible: ▶ Prescribed burning within occupied or suitable habitat for special-status bumble bees will occur from October through February to avoid the bumble bee flight season. ▶ Treatment areas in occupied or suitable habitat will be divided into a sufficient number of treatment units such that the entirety of the habitat is not treated within the same year; the objective of this measure is to provide refuge for special-status bumble bees during treatment activities and temporary retention of suitable floral resources proximate to the treatment area. ▶ Treatments will be conducted in a patchy pattern to the extent feasible in occupied or suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of unburned floral resources for special-status bumble bees within the treatment area). ▶ Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March through September). CESA and ESA Listed Species. A qualified RPF or biologist will determine if, after implementation of feasible avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance to the species, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed bumble bees (in the event the Candidate listing is confirmed) or degradation of occupied (or assumed to be occupied) habitat such that its function would	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c. Other Special-status Species. A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status bumble bees would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status bumble bees or degradation of occupied (or assumed to be occupied) habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status bumble bee species would benefit from treatment in the occupied (or assumed to be occupied) habitat area even though some of the non-listed special-status bumble bees may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to special-status bumble bee species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status bumble bees, no compensatory mitigation will be required.				
Mitigation Measure BIO-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).	**Y**	**During treatment**	**HCRCD**	**HCRCD**

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 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	**Y** Sensitive communities will be avoided, except where the treatment is designed to benefit the community.	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
sensitive natural community covers 100 acres, no more than 20 acres will be converted to create the fuel break). ▶ Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/). ▶ Time prescribed herbivory to occur when non-target vegetation is not susceptible to damage (e.g. non-target vegetation is dormant or has completed its reproductive cycle for the year). For example, use herbivores to control invasive plants growing in sensitive habitats or sensitive natural communities when sensitive vegetation is dormant but invasive plants are growing. Timing of herbivory to avoid non-target vegetation will be determined by a qualified botanist, RPF, or biologist based on the specific vegetation alliance being treated, the life forms and life conditions of its characteristic plant species, and the sensitivity of the non-target vegetation to the effects of herbivory. The feasibility of implementing the avoidance measures will be determined by the project proponent based on whether implementation of this mitigation measure will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. If the avoidance measures are determined by the project proponent to be infeasible, the project proponent will document the reasons implementation of the avoidance strategies are infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). A qualified RPF or botanist with knowledge of the affected sensitive natural community will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat functions of the sensitive natural community or oak woodland. If the project proponent determines the impact on sensitive natural communities or oak woodlands would be less than significant, no further mitigation will be required. If the project proponent determines that the loss or degradation of sensitive natural communities or oak				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
woodlands would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-3b will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the sensitive natural community or oak woodland would benefit from treatment in the occupied habitat area even though some loss may occur during treatment activities. For a treatment to be considered beneficial to a sensitive natural community or oak woodland, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the community (or similar community) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to sensitive natural communities or oak woodlands, no compensatory mitigation will be required.				
Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under Mitigation Measure BIO-3a, the project proponent will implement the following actions: ▶ Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by: ▪ restoring sensitive natural community or oak woodland 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	**N** Treatment is designed to avoid or benefit natural communities.	**NA**	**NA**	**NA**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan.				
Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat If, after implementation of SPR BIO-4, impacts to riparian habitat remain significant under CEQA, the project proponent will implement the following: ▶ Compensate for unavoidable losses of riparian habitat acreage and function by: ▪ restoring riparian habitat 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	**N** Project is designed to benefit riparian habitat. Measure would be employed if such loss were determined to occur during site work.	**NA**	**NA**	**NA**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity. 2. For restoring or enhancing riparian habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above.				
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).	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**
▶ A qualified RPF or biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified RPF or biologist and will depend on the type of wetland present (e.g., seasonal wetland, wet meadow, freshwater marsh, vernal pool), the timing of treatment (e.g., wet or dry time of year), whether any special-status species may	**Y**	**Prior to and during treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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				
Mitigation Measure BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites The project proponent will implement the following measures while working in treatment areas that contain nursery sites identified in surveys conducted pursuant to SPR BIO-10: ▶ Retain Known Nursery Sites. A qualified RPF or biologist will identify the important habitat features of the wildlife nursery and, prior to treatment activities, will mark these features for avoidance and retention during treatment ▶ Establish Avoidance Buffers. The project proponent will establish a non-disturbance buffer around the nursery site if activities are required while the nursery site is active/occupied. The appropriate size and shape of the buffer will be determined by a qualified RPF or biologist, based on potential effects of project-related habitat disturbance, noise, visual disturbance, and other factors. No treatment activity will commence within the buffer area until a qualified RPF or biologist confirms that the nursery site is no longer active/occupied. Monitoring of the effectiveness of the non-disturbance buffer around the nursery site by a qualified RPF, biologist, or biological technician during and after treatment activities will be required. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority	**Y**	**Prior to treatment**	**HCRCD**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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. 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.	**Y**	**Prior to and during treatment**	**CAL FIRE**	**HCRCD**
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	**N** No known hazardous waste sites exist in the treatment areas	**Prior to treatment**	**CAL FIRE**	**HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.				

Note: No maintenance treatments are being proposed as part of this project.

ATTACHMENT B – BIOLOGICAL EVALUATION REPORT

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Mail Ridge Forest Health and Wildfire Resilience Project Biological Resource Evaluation

Humboldt and Trinity Counties, California

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May 2025

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1.0 INTRODUCTION

This report presents the methods and results of a biological resource evaluation conducted by Vollmar Natural Lands Consulting, Inc. (VNLC) for the Mail Ridge Wildfire Resilience Project (Project). The Mail Ridge Project is a landscape-scale fuels reduction project spanning 32 miles along the crest of Mail Ridge, from the Mendocino County border to the confluence of the Main Stem and South Fork Eel River (Study Area). Of the approximately 50,000-acre Study Area, approximately 20,000 acres will be targeted for fuels reduction and forest health treatments over the next ten years (Project Area). This Project will implement mechanical and manual vegetation treatments to enhance the health and resiliency of conifer forests, oak woodlands, and grasslands. It focuses on improving fire-safe ecosystem connectivity across the landscapes and road networks. This Project was initially drafted by the Southern Humboldt Fire Safe Council (SHFSC) and local fire agencies following the August Complex Fire and is being proposed by the Humboldt County Resource Conservation District (HCRCD).

This biological resource evaluation was conducted to identify and characterize existing conditions within the Study Area and assess the potential for special-status species and sensitive habitats to occur. In the absence of minimization and avoidance measures, the Project could significantly impact the regulated biological resources listed below. Status acronyms are defined below the special-status species lists. All wildlife and plant species documented in the vicinity of the Study Area are included in **Appendix B**.

A total of 28 special-status wildlife species have potential to occur in the Study Area:

- 10 State and/or Federally listed Wildlife Species:
  - **Bald Eagle** (*Haliaeetus leucocephalus*) – SE, FP;
  - **Chinook Salmon California Coastal Evolutionarily Significant Unit (ESU)** (*Oncorhynchus tshawytscha* pop. 17) – FT, SSC;
  - **Coho Salmon Southern Oregon/Northern California ESU** *(Oncorhynchus kisutch* pop. 2) – FT, ST;
  - **Humboldt Marten** (*Martes caurina humboldtensis*) – FT, SE, SSC;
  - **Marbled Murrelet** (*Brachyramphus marmoratus*) – FT, SE;
  - **Northern Spotted Owl** (*Strix occidentalis caurina*) – FT, ST;
  - **Northwestern Pond Turtle** (*Actinemys marmorata*) – FPT, SSC;
  - **Steelhead Northern California Distinct Population Segment (DPS) Summer-run** (*Oncorhynchus mykiss irideus* pop. 48) – FT, SE;
  - **Steelhead Northern California DPS Winter-run** (*Oncorhynchus mykiss irideus* pop. 49) – FT, SSC; and
  - **Western Bumble Bee** (*Bombus occidentalis*) – SCE.

- 18 Other Special-status Wildlife Species:
  - **American Badger** (*Taxidea taxus*) – SSC;
  - **Cooper's Hawk** (*Accipiter cooperii*) – WL;
  - **Fisher** (*Pekania pennanti*) – SSC;
  - **Foothill Yellow-legged Frog** (*Rana boylii pop. 1*) – SSC;
  - **Golden Eagle** (*Aquila chrysaetos*) – FP, WL;
  - **Northern California Ringtail** (*Bassariscus astutus raptor*) – FP;

- **Northern Red-legged Frog** (*Rana aurora)* – SSC;
- **Olive-sided Flycatcher** (*Contopus cooperi*) – SSC, BCC;
- **Pacific Lamprey** (*Entosphenus tridentatus*) – SSC;
- **Townsend's Big-eared Bat** (*Corynorhinus townsendii*) – SSC;
- **Pacific Tailed Frog** (*Ascaphus truei*) – SSC;
- **Pallid Bat** (*Antrozous pallidus*) – SSC;
- **Sonoma Tree Vole** (*Arborimus pomo*) – SSC;
- **Southern Torrent Salamander** (*Rhyacotriton variegatus*) – SSC;
- **Vaux's Swift** (*Chaetura vauxi*) – SSC, BCC;
- **Western Red Bat** (*Lasiurus frantzii*) – SSC;
- **Yellow Warbler** (*Setophaga petechia*) – SSC; and
- **Yellow-breasted Chat** (*Icteria virens*) – SSC.

Wildlife Status Acronym Legend: FT – Federal Threatened; FPT – Federal Proposed Threatened; ST – State Threatened; SE – State Endangered; SCE – State Candidate Endangered; BCC – USFWS Bird of Conservation Concern; SSC – CDFW Species Special Concern; FP – CDFW Fully Protected; WL – CDFW Watch List.

A total of 53 special-status plant species have been documented in the vicinity of the Study Area (**Appendix B**). Of those species, 18 have a Federal or State listing status or a California Rare Plant Rank (CRPR) 1 or 2 and have at least some potential to occur. As such, these species have legal protection and are thus described below. These species include:

- 18 Special-status Plant Species:
  - **Baker's navarretia** (*Navarretia leucocephala* ssp. *bakeri*) – 1B.1;
  - **beaked tracyina** (*Tracyina rostrata*) – 1B.2;
  - **Bolander's catchfly** (*Silene bolanderi*) – 1B.2;
  - **coast fawn lily** (*Erythronium revolutum*) – 2B.2;
  - **giant fawn lily** (*Erythronium oregonum*) – 2B.2;
  - **Howell's montia** (*Montia howellii*) – 2B.2;
  - **Humboldt County milk-vetch** (*Astragalus agnicidus*) – 1B.1, SE;
  - **North Coast semaphore grass** (*Pleuropogon hooverianus*) – 1B.1, ST;
  - **northern clustered sedge** (*Carex arcta*) – 2B.2;
  - **northern meadow sedge** (*Carex praticola*) – 2B.2;
  - **oval-leaved viburnum** (*Viburnum ellipticum*) – 2B.3.
  - **Pacific gilia** (*Gilia capitata* ssp. *pacifica*) –1B.2;
  - **scabrid alpine tarplant** (*Anisocarpus scabridus*) – 1B.3;
  - **seacoast ragwort** (*Packera bolanderi* var. *bolanderi*) – 2B.2;
  - **Siskiyou checkerbloom** (*Sidalcea malviflora* ssp. *patula*) – 1B.2;
  - **small groundcone** (*Kopsiopsis hookeri*) – 2B.3;
  - **water howellia** (*Howellia aquatilis*) – 2B.2, FD; and
  - **white-flowered rein orchid** (*Piperia candida*) – 1B.2.

Rarity Status Codes: SE – State Endangered; ST –State Threatened; FD – Federally Delisted.
CRPR Codes: List 1B = Plants rare, threatened or endangered in CA and elsewhere; List 2B = Plants rare, threatened or endangered in California but more common elsewhere. '.1' = Seriously threatened in CA; '.2' = Fairly threatened in CA; '.3' = Not very threatened in CA.

In addition, all active nests of native bird species are protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. Aquatic resources are present within the Study Area, although no official wetland delineation has been conducted. The implementation of Standard Project Requirements (SPRs) and Mitigation Measures included in the California Board of Forestry and Fire Protection Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (PEIR) would reduce potential impacts to habitats and features to less-than-significant levels.

2.0 EXTENT AND LOCATION OF THE STUDY AREA

The Study Area encompasses approximately 50,000 acres, with the majority located in Southern Humboldt County and a small portion in Trinity County. To reach the Study Area from Garberville, head north on US-101 N from Redwood Dr. Take exit 645 for CA-271 toward Alderpoint Rd, then turn right onto CA-271 N, followed by an immediate right onto Alderpoint Rd. Continue on Alderpoint Rd for approximately 20 miles to reach the vicinity of Mail Ridge. Within this Study Area, fuels reduction treatment activities could occur across up to 20,000 acres (**Figures 1 and 2**). This Project aims to create a connection between other fuels reduction initiatives in the area, effectively serving as a central 'project anchor' for regional fuels reduction efforts. The project anchor is defined as the length of Mail Ridge, which follows Dyerville Loop Rd. This road extends from the confluence of the South Fork and Main Stem of the Eel River to Bell Springs Rd and the Mendocino County line.

The project anchor will act as the central point or reference line from which treatment areas are organized, ensuring a systematic and strategic approach to fuels reduction in the region. The anchor not only outlines the geographic focus of the project but also enhances logistical planning by concentrating efforts along a continuous, accessible corridor. The project anchor includes a buffer zone of ¼ mile on either side of the ridge/road corridor, encompassing all parcels that intersect this buffer. The unincorporated communities to the west of the Study Area are Benbow, Garberville, Redway, Phillipsville, Miranda, Myers Flat, and Weott. The unincorporated communities to the east of the Study Area are Alderpoint, Steelhead, and Fort Seward. Unincorporated communities within the Study Area are Fruitland Ridge, New Harris, and Harris.

Legend

- Highway
- Project Study Area
- County Boundary
- Town or Developed Area
- Preserved Land or Public Property

FIGURE 1
Regional Vicinity Map

Mail Ridge Forest Health and Wildfire Resilience Project
Humboldt County, California

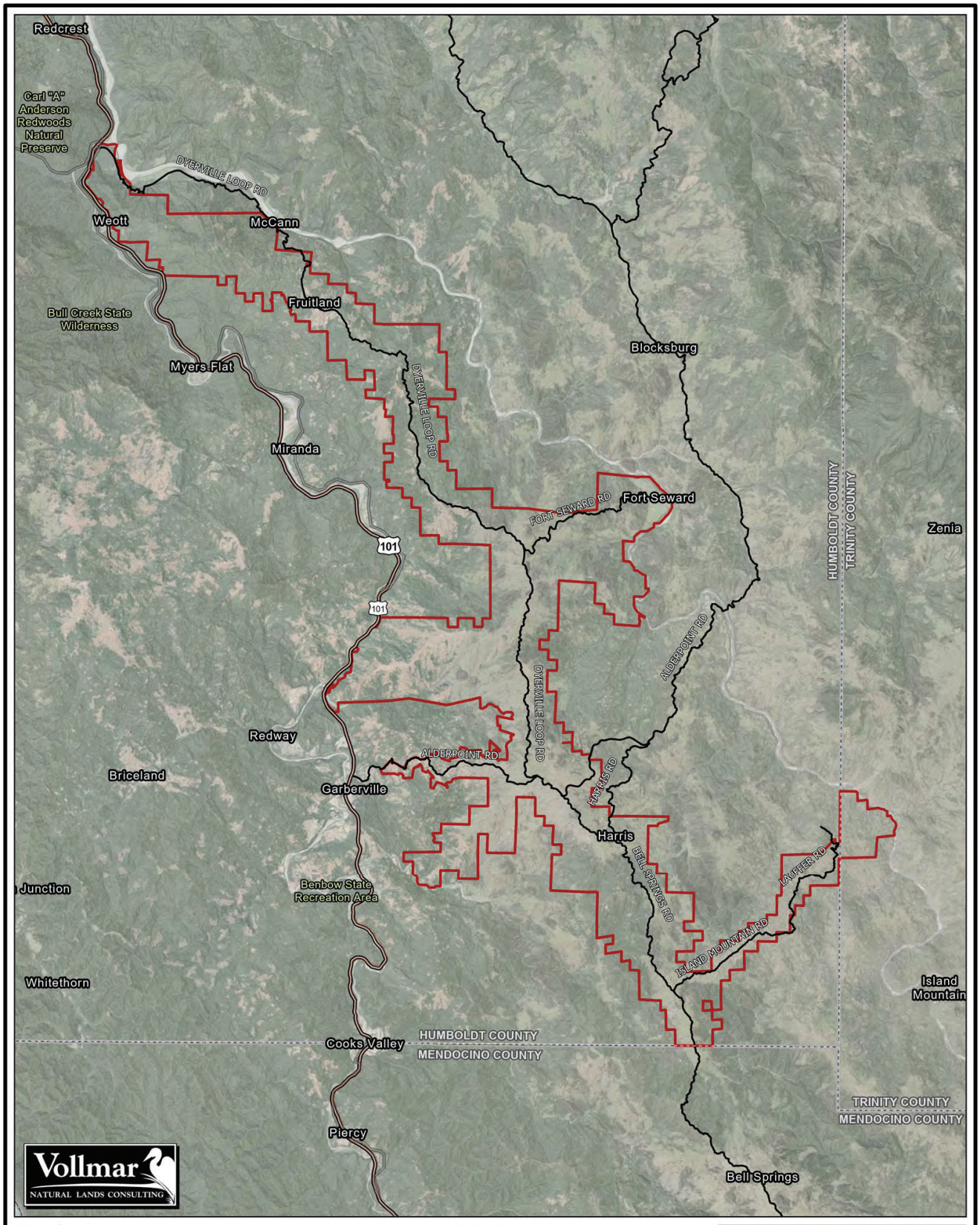
N
W E
S

1:350,000

0 5 10 20 Kilometers

0 2.75 5.5 11 Miles

Data Sources: CPAD, 2025 | USHUD, 2024 | Esri Topo, 2025
Cartography by S. Wrigley 05/12/2025
Map File: 629_MailRidge_AllMapsProject.aprx



Legend

- Access Roads
- Highway
- Project Study Area
- County Boundary

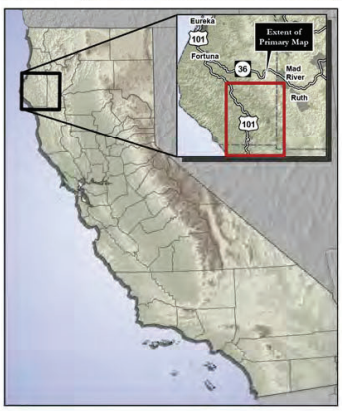
FIGURE 2
Study Area and Proposed Project Area Map

Mail Ridge Forest Health and Wildfire Resilience Project
Humboldt County, California

1:158,400

0 2.5 5 10 Kilometers

0 1.25 2.5 5 Miles



Data Sources: Humboldt GIS, 2024 | Esri World Imagery & Hillshade, 2025
Cartography by S. Wrigley 05/12/2025
Map File: 629_MailRidge_AllMapsProject.aprx

3.0 PROPOSED CALVTP TREATMENT TYPES

The project will incorporate all three treatment types assessed in the CalVTP PEIR: Wildland Urban Interface (WUI), Shaded Fuel Break, and Ecological Restoration. Descriptions for each treatment type are included below. It is important to note that the Shaded Fuel Break treatments overlap with both Ecological Restoration and WUI treatments in some areas, resulting in a total acreage that exceeds the overall Study Area acreage.

3.1 Wildland Urban Interface

The proposed Study Area includes approximately 1,155 acres of potential WUI treatment type. All treatment activities that would occur in the WUI areas are described in **Section 4.0**, below. Prescribed fire broadcast burning could occur on all treated WUI, forest, shrub, and grassland areas with a minimum of 100 feet buffering surrounding structures. Prescribed herbivory could be applied throughout WUI grasslands where landowners are willing to graze and have grazing infrastructure.

3.2 Shaded Fuel Break

The proposed Study Area includes approximately 2,092 acres of potential Shaded Fuel Break treatment type. There will be no unshaded fuel breaks in the Project. Shaded Fuel Break treatment activities are described below. Prescribed herbivory treatments will be applied to grasslands where landowners already graze and have grazing infrastructure in the shaded fuel break.

3.3 Ecological Restoration

The proposed Study Area includes approximately 48,593 acres of potential Ecological Restoration treatment (though only up to 20,000 acres will be treated). This treatment type would be implemented throughout the Study Area, excluding WUI areas. In oak woodlands, the focus will be on removing Douglas-fir (*Pseudotsuga menziesii*) trees that are encroaching upon oak woodlands. Invasive plant removal will take place in all habitat types undergoing the proposed ecological restoration. Manual and mechanical invasive plant removal from grassland and forest areas will be implemented to restore historic and native habitat structure and species composition. Invasive plant removal will target species such as Scotch broom (*Cytisus scoparius*), French broom (*Genista monspessulana*), Pampas grass (*Cortaderia selloana*), and other non-native grasses where populations exist within treatment areas.

Invasive plant removal will be completed using tools such as a weed wrench or excavator's thumb to remove plants from the ground, and vegetation will be piled in designated locations. Manual treatments will occur year-round as weather and environmental conditions permit.

Areas of exposed soils larger than 100 square feet from invasive plant removal will be seeded with native grass and forb seed mix in the fall when adequate soil moisture is available for germination.

4.0 Treatment Activities

4.1 Mechanical Treatment

Mechanical forest thinning treatments will be conducted on approximately 18,091 acres within forested areas on slopes less than 40%, in locations accessible to heavy equipment. The treatments may involve various equipment types, including excavator-mounted forestry mulchers/masticators, cut-to-length harvesters, and tracked mulchers, depending on site conditions, tree size class, and the type of equipment available at the time of implementation.

Excavator-mounted forestry mulchers and tracked mulchers will masticate whole trees up to 18 inches in diameter, leaving in place a chip bed with an average spacing of up to 20-30 feet between trees. Trees under 18 inches in diameter that are retained will achieve an average spacing of 15-20 feet when feasible. Special attention will be given to retaining individual trees of species that are under-represented within the stand and the Project Area, as well as trees that provide wildlife habitat. Dense patches of shrubs will be masticated in areas where they would act as ladder fuels and increase wildfire; diverse patches of shrubs will be left in place to increase native plant and vegetative structural diversity in the understory. Tree and shrub species under-represented within the forest stand and the larger Study Area, as well as trees that provide wildlife habitat, will be left untreated.

Felled trees will be bucked into sections no longer than 8 feet, using a lop-and-scatter method, ensuring that all portions of the felled tree are in contact with the ground. Slash that has been lopped and scattered will be no higher than 18 inches off the ground, and slash will not be placed near the base of remaining trees. When feasible, excavators and other small, tracked equipment can be used to generate piles for further treatment.

Mechanical treatments will occur year-round as weather and environmental conditions permit. Mechanical treatments could be followed by manual treatments, where pole saws will be used to prune limbs up to 15 feet high, and chainsaws will be employed to cut any slash left by equipment that has not met the specifications.

4.2 Manual Treatment

Manual treatments will be conducted on approximately 20,000 acres using chainsaws to fell trees up to 18 inches in diameter, leaving an average spacing of residual trees up to 20-30 feet apart. Dense patches of shrubs that act as ladder fuels and pose a wildfire risk will be removed; diverse patches of shrubs will be retained to enhance native plant and vegetative structural diversity in the understory. Trees under 18 inches in diameter that are retained will achieve an average spacing of 15-20 feet when feasible. Special attention will be given to retaining individual trees of species that are under-represented within the stand and the Project Area, as well as trees that provide wildlife habitat. Felled trees will be bucked into sections no longer than 8 feet in length, using a lop-and-scatter method so that all portions of the felled tree are touching the ground. Slash that has been lopped and scattered will be no higher than 18 inches off the ground, and slash will not be placed near the base of residual trees. When feasible, felled trees and slash will be piled for later burning. Manual thinning treatments will occur year-round as weather and environmental conditions permit.

4.3 Prescribed Fire (Pile Burn)

Burn piles will be utilized across approximately 8,350 acres within the Study Area. Biomass from mechanical and manual treatments will be piled using mechanical equipment or by manual work crews. A qualified burn boss will develop a burn plan and oversee all burning activities to ensure safe fire practices. Pile burning will occur in both forest areas with little to no live overstory as well as grassland areas. Piles will have an approximate radius of 10 feet and be kept below six feet in height. Pile burning will not occur in sensitive habitats, including wet meadows or areas with abundant native plants. Areas that are burned will be seeded with a native seed mix, as described above. Piles will be burned between November and March, depending on weather and climatic conditions.

4.4 Prescribed Fire (Broadcast)

Broadcast and cultural burning treatments are proposed to be implemented over the entire approximately 50,000 acres previously treated with manual and mechanical thinning. Biomass from these treatment activities will be left in place to cure for at least six months prior to burning. This allows the biomass to dry, enabling a successful burn. Prior to burning activities, sensitive habitats and culturally sensitive areas within the burn unit will be delineated. The treatment will begin with the development of a burn plan by a qualified burn boss. The burn will be conducted by qualified individuals under the supervision of the burn boss. Resources, including heavy equipment and water tenders from agencies and local fire departments, will be on-site during all burn activities to ensure safe containment. Broadcast burn treatments will occur between October and June as weather and climatic conditions allow.

4.5 Prescribed Herbivory

Approximately 5,000 acres of prescribed herbivory will be implemented in grassland and shrub habitats. A grazing plan will be made to support specific targets (e.g., invasive reduction, fuels reduction close to houses, etc.). Focused cattle grazing may be used when willing landowners who already graze and have grazing infrastructure are interested in participating. Additional infrastructure, including fencing, temporary fencing, water, and food supplement infrastructure, may be installed to support the grazing plan objectives.

4.6 Herbicide Application

Herbicide application will be used for up to 20 acres in targeted situations via backpack sprayer where noxious invasive plants occur and have a high risk of spreading. Additionally, some herbicide use may occur in shrub vegetation re-sprout situations. All herbicide applications will comply with CalVTP rules and guidelines.

5.0 METHODS

5.1 Preliminary Review

Prior to conducting field surveys, VNLC ecologists compiled and reviewed existing information pertaining to the Study Area. This includes data from the latest version of the California Natural Diversity Database (CNDDB; CDFW 2025), the California Native Plant Society (CNPS) Inventory of Rare Plants (CNPS 2025a) and U.S. Fish and Wildlife Service (USFWS) Information Planning and Consultation System (IPaC) list (USFWS 2025). Site aerial imagery, previous reports, project descriptions, and general regional conditions were also reviewed prior to the site survey.

5.2 Targeted Sensitive Biological Resources

Special-status animal species targeted and analyzed in this report include those listed by the USFWS and California Department of Fish and Wildlife (CDFW) as threatened or endangered, as well as those proposed for listing or that are candidates for listing as threatened or endangered. The listing of "Endangered, Rare, or Threatened" is defined in Section 15380 of the *California Environmental Quality Act* (*CEQA*) *Guidelines*. Section 15380(b) states that a species of animal or plant is "endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors. A species is "rare" when either "(A) although not presently threatened with extinction; the species exists in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens, or (B) the species is likely to become endangered within the foreseeable future throughout all or a portion of its range and may be considered 'threatened' as that term is used in the Federal Endangered Species Act" (ESA).

Animal species are designated as "Fully Protected", "Species of Special Concern", or "Watch List" by the CDFW. Although these species have no legal status under the California Endangered Species Act (CESA), the CDFW recommends their protection as their populations are generally declining, and they could be listed as threatened or endangered (under CESA) in the future. Species designated as "Fully Protected" by CDFW generally may not be taken or possessed at any time. CDFW may only authorize take for necessary scientific research and may authorize live capture and relocation of "fully protected" birds to protect livestock. The "Species of Special Concern" designation is meant to call attention to the plight of the species and address the issues of concern early enough to secure their long-term viability. "Watch List" species were previously designated as "Species of Special Concern" but no longer meet that status or do not yet meet that status, but there is a concern and a need for more information to clarify the status.

The USFWS may also designate birds as "Birds of Conservation Concern." Although these species have no legal status under ESA, the USFWS recommends their protection as their populations are generally declining, and they could be listed as threatened or endangered (under ESA) in the future.

Special-status plants include species that are designated as rare, threatened, or endangered, as well as proposed species for listing by the USFWS. Special-status plants also include species considered rare or endangered under the conditions of Section 15380 of the CEQA Guidelines,

such as those plant species identified by the CNPS as CRPR 1A, 1B, and 2 in the Inventory of Rare and Endangered Vascular Plants of California.

For the purposes of this report, sensitive plant communities include those designated as such by the CDFW, either in the CNDDB, the list of California Sensitive Natural Communities (CDFW 2022), or as sensitive alliances classified in the online Manual of California Vegetation (MCV) (CNPS 2023b). Alliances included within the MCV that are designated as global or state rank ("G" or "S") 1-3 are considered "rare or threatened" at the global and/or state level and are therefore considered sensitive. In addition, wetland and riparian habitats, regardless of MCV/CDFW status, are considered sensitive. Wetlands, streams, and permanent and intermittent drainages are subject to the jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Federal Clean Water Act (CWA). CDFW can also claim jurisdiction over these resources, together with other aquatic features that provide an existing fish and wildlife resource pursuant to Sections 1602-1603 of the California Fish and Game Code. The CDFW asserts jurisdiction over the outer edge of vegetation associated with a riparian corridor. The Regional Water Quality Control Board (RWQCB) can also have jurisdiction over streams and wetlands under Section 401 or the Porter-Cologne Act. Any grading, excavation, or filling of jurisdictional drainage corridors or wetlands would require permitting consultation with the above-listed resource agencies.

5.3 Field Survey

In January 2025, reconnaissance-level field surveys were conducted across multiple parcels within the Study Area. These surveys took place on January 14, 15, and 22, 2025 with each site carefully chosen to encompass the full range of habitat types present across the region. The surveys were led by VNLC Senior Ecologist Drew Barber and Staff Ecologists Nico Vollmar, Katherine Gregory, Skyler Wrigley, and Jett Hagerty. Using project maps and GPS-integrated background files in Field Maps, the team efficiently navigated various terrain types, ensuring thorough documentation of georeferenced data points. The surveys focused on detailed habitat assessments, identifying plant species composition, evaluating the potential for wildlife habitat, and assessing areas of active wildlife use. The team also documented wetlands, stream-road intersections, and road conditions, providing a comprehensive understanding of the landscape.

6.0 EXISTING SITE CONDITIONS

The Study Area encompasses regions in southern Humboldt County to the northern Mendocino County line to the south, covering a total of 51,476 acres. The landscape is characterized by rugged topography, consisting primarily of steep, forested hills interspersed with open grassland areas along ridgelines. These varied landforms support a wide range of vegetation types, including mixed oak woodlands, coniferous forests, grasslands, and riparian zones. As expected, the Study Area provides habitat for many wildlife and plant species.

The climate in the Study Area is Mediterranean, with mild, wet winters and warm, dry summers. Average annual rainfall ranges from 40 to 60 inches, with most precipitation falling between November and March. The area experiences an east-west rain shadow effect, where moisture from the Pacific Ocean is blocked by the coastal mountains. As a result, the eastern side of the ridge tends to be drier compared to the western side, contributing to differences in vegetation and habitat distribution.

6.1 Habitat Types

Plant communities and habitats within the Study Area were identified using CalVeg layers and mapped during reconnaissance-level field surveys conducted by VNLC staff. During these surveys, VNLC ecologists classified each habitat type and documented its key characteristics, including the total acreage of each habitat, the dominant plant species present, and the potential for special-status plant and wildlife species to occur. The findings from these assessments are summarized below, offering an overview of the ecological features within the Study Area.

6.1.1 Pseudotsuga menziesii Forest and Woodland Alliance

This habitat type covers approximately 21,194 acres within the Study Area and aligns with the CNPS classification of *Pseudotsuga menziesii* - (*Notholithocarpus densiflorus* - *Arbutus menziesii*) Forest and Woodland Alliance. The dominant species in this habitat include Douglas-fir, California bay laurel (*Umbellularia californica*), Pacific madrone (*Arbutus menziesii*), tanoak (*Notholithocarpus densiflorus*), and goldback ferns (*Pentagramma triangularis*). This conifer-dominant forest type supports a range of vegetation that thrives in the cool, shaded conditions typical of the North Coast, creating a dynamic and ecologically rich environment.

6.1.2 Quercus garryana Forest and Woodland Alliance

This habitat type spans approximately 12,125 acres of the Study Area, with the dominant tree species being Oregon white oak (*Quercus garryana*), California black oak (*Quercus kelloggii*), Douglas-fir, tanoak, and Pacific madrone, which often form closed canopies. Within the Study Area, Oregon white oak, California black oak, and Douglas-fir dominate the landscape, with smaller populations of tanoak, Pacific madrone, and California bay laurel scattered throughout these stands. This habitat aligns with the CNPS classification of *Quercus garryana* Forest and Woodland Alliance.

A notable feature of the oak woodlands surveyed is the widespread encroachment of conifers, particularly Douglas-fir, into what were historically oak-dominated areas. Mature and well-established Oregon white oaks and California black oaks were often seen surrounded by young Douglas-fir, signaling a shift in the forest composition. This encroachment is indicative of a

landscape that has been fire-suppressed, with oak woodland slowly turning into conifer-dominated habitat types (USDA 2015).

6.1.3 Baccharis pilularis Shrubland Alliance

Shrub-dominated habitat covers approximately 80 acres of the Study Area, especially within the central and southern portions of the Study Area. This habitat type aligns with the CNPS classification of *Baccharis pilularis* Shrubland Alliance. This habitat is generally composed of dense shrubs with scattered grassy openings (CNPS 1988). The dominant species in this habitat was very dense populations of coyote brush (*Baccharis pilularis*), usually with Oregon white oaks around the perimeters of the shrub habitat with a ground cover of rough dog's tail (*Cynosurus echinatus*). Other species that were observed in smaller numbers were western poison oak (*Toxicodendron diversilobum*), French broom, and green leaf manzanita (*Arctostaphylos patula*).

6.1.4 Cynosurus echinatus - Arrhenatherum elatius Herbaceous Semi-Natural Alliance

This habitat type encompasses approximately 16,348 acres of the Study Area and is predominantly characterized by invasive grasses. Grassland habitats within the region are defined by a dominant cover of annual grasses, including species such as rough dog's-tail, medusahead (*Elymus caput-medusae*), and rattlesnake grass (*Briza maxima*). These species, while adaptive and resilient, have contributed to the widespread establishment of non-native vegetation in these grasslands. Other species that are present within these grasslands are rabbitsfoot grass (*Polypogon monspeliensis*), orchard grass (*Dactylis glomerata*), blue wild rye (*Elymus glaucus*), tall oatgrass (*Arrhenatherum elatius*), and slender oat (*Avena barbata*). This habitat type aligns with the CNPS classification of *Cynosurus echinatus - Arrhenatherum elatius* Herbaceous Semi-Natural Alliance. Species-level identification of grassland species was challenging due to extensive grazing by cattle prior to the survey and the time of the year the survey was conducted (January). During winter months, most grass species are not in bloom, and constant moisture leads to the decomposition of identifying features (awns, sheathes, etc.). The grazing pressure significantly reduced vegetation height and density, obscuring key plant structures that serve as indicators of habitat composition.

6.1.5 Rock Outcrops

The rock outcrop habitat type is widely distributed throughout the Study Area, providing a distinct ecological niche within the landscape. Characterized by exposed rocky substrates, these habitats support a variety of plant species uniquely adapted to the challenging conditions of limited soil depth, water retention, and exposure to sun and wind. Dominant vegetation includes Pacific madrone, California bay laurel, greenleaf manzanita, coyote brush, and California black oak.

A notable feature of these rock outcrops is the frequent presence of large Pacific madrone or California bay laurel trees growing directly next to the exposed rock. These trees often serve as vantage points for raptors, such as red-tailed hawks (*Buteo jamaicensis*), to hunt prey in the surrounding grasslands where these outcrops are typically located.

In addition to their role as hunting perches, rock outcrops provide essential microhabitats for various wildlife species. Lizards, snakes, and small mammals take advantage of the crevices and sheltered spaces for protection and basking opportunities. These habitats contribute not only to the structural complexity of the landscape but also to the biodiversity of the Study Area, supporting both flora and fauna that rely on their unique features.

6.1.6 Sequoia sempervirens Forest Alliance

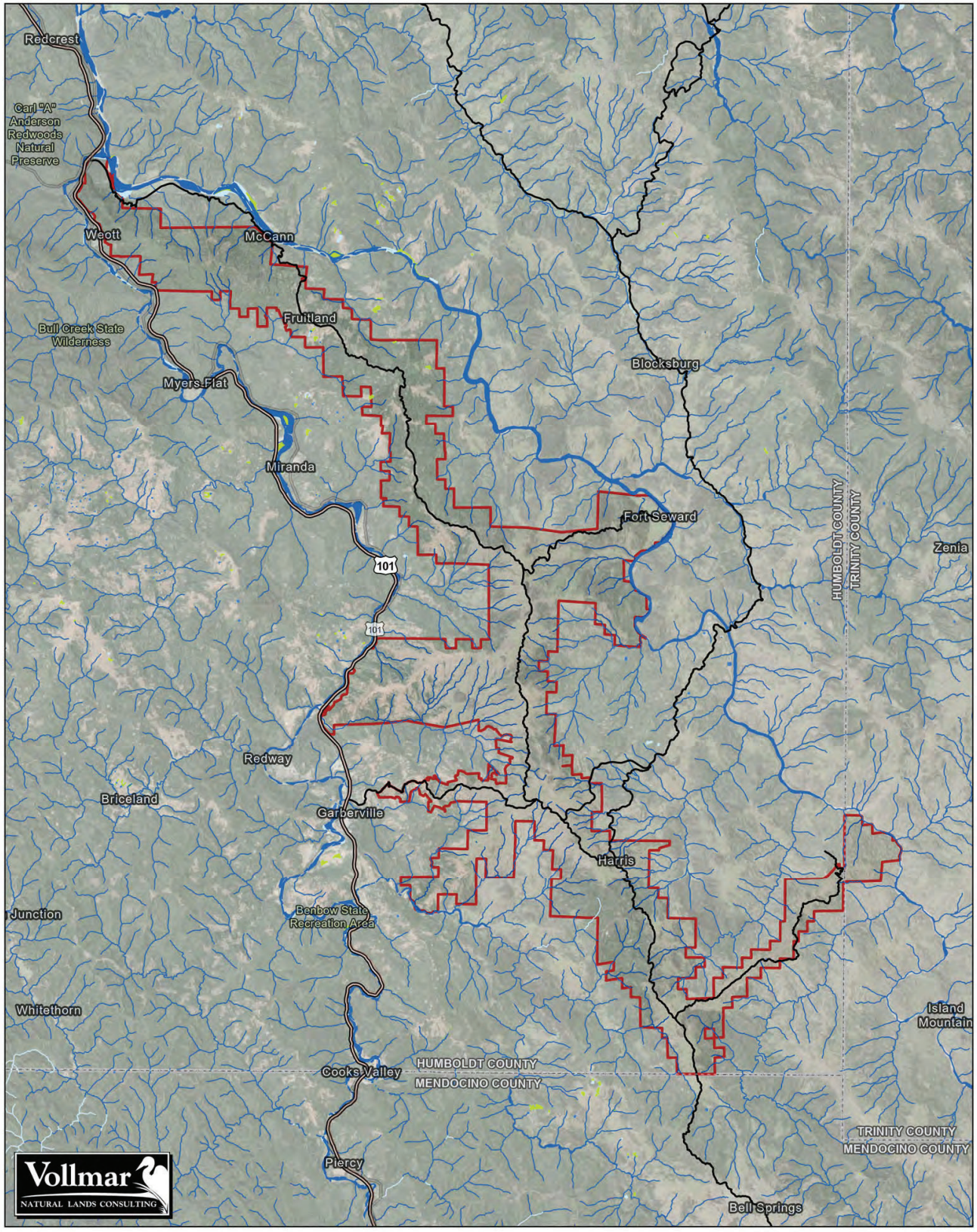
This habitat type is present at the southern, western, and northern edges of the Study Area, with older growth found along the northern margins, where increased moisture levels create ideal conditions for coast redwoods (*Sequoia sempervirens*) to thrive. This habitat type was primarily composed of coast redwood, Douglas-fir, tanoak, blue blossom ceanothus (*Ceanothus thyrsiflorus*), western sword fern (*Polystichum munitum*), western maidenhair fern (*Adiantum aleuticum*), lady fern (*Athyrium filix-femina*), evergreen huckleberry (*Vaccinium ovatum*), California blackberry (*Rubus ursinus*), thimbleberry (*Rubus parviflorus*), redwood sorrel (*Oxalis oregana*), salal (*Gaultheria shallon*), and western poison oak. This habitat type aligns with the CNPS classification of *Sequoia sempervirens* Forest Alliance.

There was a distinct variance in the plant communities in areas that have experienced disturbance. In these areas of disturbance (harvested areas and roadsides), there was an abundance of invasive species such as French broom, Pampas grass, Himalayan blackberry (*Rubus armeniacus*), English ivy (*Hedera helix*), and yellow bush lupine (*Lupinus arboreus*) with a ground cover of penny royal (*Mentha pulegium*). Also, multiple stands of dead tanoaks were found in this habitat, potentially infected with sudden oak death (*Phytophthora ramorum*) based on observation of a black liquid being secreted from multiple dead or dying trees in the stand and the high mortality rate of species. Additional species observed in this habitat type, though not considered primary or dominant, include bigleaf maple (*Acer macrophyllum*), red huckleberry (*Vaccinium parvifolium*), orange bush monkey flower (*Diplacus aurantiacus*), woodland strawberry (*Fragaria vesca*), Douglas iris (*Iris douglasiana*), skunk cabbage (*Lysichiton americanus*), Jeffery pine (*Pinus jeffreyi*), Pacific madrone, greenleaf manzanita, silver bush lupine (*Lupinus albifrons*), rattlesnake grass, rough dog's-tail, and Yorkshire fog (*Holcus lanatus*). Wildlife observations in this habitat included bumble bee species (*Bombus* sp.), ensatina (*Ensatina eschscholtzii*), and slender salamander (*Batrachoseps attenuatus*).

6.2 Aquatic Resources

A desktop delineation and reconnaissance-level site assessment identified numerous creeks and aquatic features within the Study Area (**Figure 3**). Larger features such as Poison Oak Creek, Pipe Line Creek, Bell Creek, McCann Creek, Elk Creek, Jackass Creek, Soda Creek, Buck Mountain Creek, and the main stem of the Eel River, as well as smaller tributaries, are potential jurisdictional aquatic resources under the ACOE, CDFW, and RWQCB. In addition, CDFW jurisdiction could include any riparian vegetation associated with these aquatic resources. During our field surveys in January 2025, we surveyed Jackass Creek and Soda Creek where we identified chain fern (*Woodwardia fimbriata*), twinflower (*Linnaea borealis*), Oregon white oak, California bay laurel, and Douglas-fir. The stream habitat quality was extremely high, and we expect this to be suitable habitat for foothill yellow-legged frog (*Rana boylii*), Pacific tailed frog (*Ascaphus truei*), and possibly southern torrent salamanders (*Rhyacotriton variegatus*).

The northernmost section of the Study Area, primarily dominated by coast redwood habitat, also includes several streams flowing through coast redwood-lined valleys. One notable stream emptied into a pond covered with duckweed (*Lemna minor*), where we observed an abundance of northwestern salamander (*Ambystoma gracile*) egg masses.



Legend

- Access Roads
- Highway
- Project Study Area
- County Boundary

NWI California Wetland*

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

*All NWI California Wetlands remotely mapped

Data Sources: USFS, 2024 | Humboldt GIS, 2024 | Esri World Imagery & Hillshade, 2025
Cartography by S. Wrigley 05/12/2025
Map File: 629_MailRidge_AllMapsProject.aprx

FIGURE 3
Aquatic Resources Map

Mail Ridge Forest Health and Wildfire Resilience Project
Humboldt County, California

N
W E
S

1:158,400

0 2.5 5 10 Kilometers

0 1.25 2.5 5 Miles

7.0 SPECIAL-STATUS SPECIES AND SENSITIVE HABITATS

This section describes all species with potential to occur within the Study Area and sensitive habitats present within it. Recommended avoidance and minimization measures to reduce the potential for the Project to impact these species or sensitive habitats are described below. The impacts of fuels reduction project activities on special-status wildlife, plants, and sensitive habitats have been examined in detail in the CalVTP PEIR. As such, this report includes the Mitigation Measures developed and approved in the PEIR to mitigate potential impacts to species and habitats that are or could be present within the Study Area.

Based on the habitat requirements of these species, there are 28 special-status wildlife species with some potential to occur within the Study Area. These include 10 State and/or Federally listed wildlife species and 18 non-listed special-status wildlife species. Additionally, birds that fall under the MBTA may be present. While 53 special-status plant species have potential to occur in the Study Area, 18 of these species are either State or Federally listed or have a CRPR of 1 or 2 and are described below. No special-status plant species were observed during our reconnaissance-level botanical surveys of the Study Area. All special-status species known from the project region are listed in **Appendix B**, along with their regulatory status, habitat requirements, and an evaluation of their potential to occur in the Study Area. Special-status species with potential to occur are described in more detail below.

7.1 Federal or State Listed Animal Species

7.1.1 Northern Spotted Owl (Strix occidentalis caurina)

The Northern Spotted Owl (*Strix occidentalis caurina*; NSO) is listed as Federally Threatened and State Threatened. The main threats to this species are competition from Barred Owls (*Strix varia*), which displace Spotted Owls by disrupting their nests and competing with them for food, as well as habitat loss due to timber harvest and land conversion (USFWS 2011). Spotted Owls are approximately 18.5 inches in length with a 40-inch wingspan and a weight of 21 oz. The breeding range of this species extends from southwestern British Columbia through California's North Coast Ranges to Marin County. Spotted Owls usually nest in tree or snag cavities, or in the broken top of large trees. Other nesting sites include caves or crevices within cliffs. They require mature forests with large old trees, snags, multiple canopy layers, and downed woody debris. Spotted Owls are not migratory, though some individuals may move down-slope in the winter (Zeiner and Laudenslayer 1990).

Potential Project Impacts

The *Pseudotsuga menziesii* Forest and Woodland Alliance and old-growth *Sequoia sempervirens* Forest Alliance in the Study Area are suitable nesting habitat for the NSO. Disturbance from prescribed burns, heavy equipment, chain saws, and vehicles could potentially result in the abandonment of nests and loss of eggs or chicks, due to excessive equipment noise and burning of habitat.

Per SPR BIO-1.1, if it is determined that adverse effects on suitable habitat for nesting special-status birds can be clearly avoided by conducting treatments outside of the season of sensitivity, then no additional mitigation measures would be required. Adverse effects on nesting NSO would

be clearly avoided by conducting manual and mechanical treatments between September 1 and February 28, outside of the nesting bird season (March 1 through August 31).

If treatment activities are conducted during portions of the nesting season, these activities could result in direct loss of active nests or disturbance to active nests from auditory and visual stimulus (e.g., heavy equipment, chainsaws, vehicles, personnel), potentially resulting in abandonment of nests and loss of eggs or chicks. The potential for treatment activities and maintenance treatments to result in adverse effects on special-status birds was examined in the PEIR.

If mechanical or manual treatments occur during the nesting season, then SPR BIO-10 and SPR BIO-12 would apply. Pre-construction visual surveys (daytime stand searches) for NSO would be conducted within suitable nesting habitat no more than 14 days prior to treatments by a biologist with knowledge of, and ability to recognize, NSO. In addition, no more than 14 days prior to project activities conducted during the NSO nesting season that are within 1,300 feet of an NSO AC and/or within 1,300 feet of NSO nesting roosting habitat on state park property, where NSO surveys have not occurred or survey information is not available, one nighttime survey that includes broadcasting calls followed by a daytime stand search shall be conducted (**Figure 6**, later in this document). CDFW will be contacted prior to any project activities within the 1,300-foot protection area.

If no active NSO nests are observed during these surveys, then additional mitigation for this species would not be required.

If active NSO nests are observed during visual surveys, then CDFW will be notified and Mitigation Measure (MM) BIO-2a would be implemented. Under Mitigation Measure BIO-2a, a no-disturbance buffer of at least 0.25 mile would be established around NSO nests, and no manual or mechanical treatment activities would occur within this buffer until the chicks have fledged as determined by a qualified biologist. If disturbance is detected, the buffer distance will be increased per the recommendation of the biologist and/or CDFW or USFWS. Additionally, trees containing active or inactive NSO nests would not be removed.

Prescribed burn areas would contain little if any NSO habitat, and focus on understory and grassland components, so no impacts are anticipated from this treatment type.

Under Mitigation Measure BIO-2a, habitat function for NSO would be maintained by opening the understory and removing smaller trees, allowing larger trees (preferred by this species) to thrive and reducing the risk of wildfire. A qualified Registered Professional Forester (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.

Incorporation of CalVTP SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2a will bring the potential impacts to a less than significant level; this includes the stipulation that no project activities shall occur within the 0.25-mile buffer around an active NSO nest. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.1.2 Marbled Murrelet (Brachyramohus marmoratus)

The Marbled Murrelet (*Brachyramohus marmoratus*) is listed as Federally Threatened and State Endangered. It inhabits coastal, old-growth forests from Northern California to Alaska. Nests are built on the broad, mossy limbs of key tree species, including Douglas-fir, Sitka spruce (*Picea sitchensis*), and coast redwood. As a result of their unique nesting requirements, their method of nesting was only discovered in 1974 (California State Parks 2024). Females lay a single egg, which is tended by both parents until hatching. They forage in the ocean, eating small fish and zooplankton. Adults forage alone or in small flocks, especially in the southern portions of their range (Cornell 2024). They are still at risk from habitat loss and predation from Jays and Ravens (California State Parks 2024).

Potential Project Impacts

The *Sequoia sempervirens* Forest Alliance, particularly areas with mature and old-growth trees, is suitable nesting habitat for the Marbled Murrelet. Disturbance from prescribed burns, heavy equipment, chainsaws, and vehicles could potentially result in the abandonment of nests and loss of eggs or chick due to excessive equipment noise and burning of potential nesting habitat.

The inclusion of SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2a will reduce impacts to a less-than-significant level; this includes the stipulation that no project activities shall occur within a 0.25-mile buffer around an active Marbled Murrelet nest. Incorporation of the above-listed SPRs and Mitigation Measures will ensure the proposed project is consistent with the PEIR finding of a less than significant impact and would not result in a substantially more severe significant impact than what was covered in the PEIR.

7.1.3 Bald Eagle (Haliaeetus leucocephalus)

The Bald Eagle (*Haliaeetus leucocephalus*) is a State Endangered and Fully Protected species that faced a massive population decline due to DDT poisoning in the 1900s. Today, the main threats to this species are lead poisoning, habitat destruction (which has led to loss of prey), and monofilament ingestion, entanglement, and contamination. During their breeding season, this species will occur in many types of wetland habitats such as seacoasts, rivers, large lakes, or other large bodies of open water with an abundance of fish. In California, Bald Eagles now primarily breed in northern California at lower elevations (Polite and Pratt 1988). Males and females work together to build large stick nests in the canopies of tall trees typically located near a large body of water (Call 1978).

Potential Project Impacts

The *Pseudotsuga menziesii - (Notholithocarpus densiflorus - Arbutus menziesii*) Forest and Woodland Alliance in the Study Area, particularly areas near large trees and water bodies, provides suitable nesting habitat for the Bald Eagle. Disturbance from prescribed burns, heavy equipment, chainsaws, and vehicles could potentially result in the abandonment of nests and loss of eggs or chicks due to excessive equipment noise and burning of potential nesting habitat.

The inclusion of SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2a will reduce impacts to a less-than-significant level; this includes the stipulation that no project activities shall occur within a 0.25-mile buffer around an active Bald Eagle nest. Incorporation of the above-listed SPRs and

Mitigation Measures will ensure the proposed project is consistent with the PEIR finding of a less than significant impact and would not result in a substantially more severe significant impact than what was covered in the PEIR.

7.1.4 Western Bumble Bee (Bombus occidentalis)

Western bumble bees (*Bombus occidentalis*) are an imperiled species of bumble bee that is a Candidate under CESA. These bumble bees are native to western North America. In spring, queen bees emerge from small hibernation cavities and seek nesting sites for the coming year. After a suitable site is selected, they begin producing eggs for worker bees. The queen will forage and feed this first clutch of offspring independently but will delegate foraging and colony upkeep to the worker bees as they mature. As summer progresses, the queen begins producing queens and male bees. These bees leave the hive where they interact with other males and queens, resulting in mated queens. As winter approaches, all individuals but the mated queens die, and these queens find their own burrow to hibernate over the long winter. This species is threatened by habitat loss and fragmentation, as well as invasive pathogens from Europe.

Potential Project Impacts

There are two CNDDB occurrences of this species within the Study Area; one is 1 mile northwest of Weott and the other is in Fort Seward. Habitat for western bumble bee is present in *Cynosurus echinatus- Arrhenatherum elatius* Herbaceous Semi-Natural Alliance within the Study Area. Potential impacts to this species from the Project are loss of forage plants due to fire (reducing/eliminating nectar sources), destruction of ground nests, and harmful application of herbicide if applied to flowering plants where bumble bees forage. SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2g should be included to mitigate these risks. If a western bumble bee individual, nest, or hibernacula is detected, a 50-foot no operations buffer shall be established and CDFW shall be contacted to discuss any additional avoidance measures.

Incorporation of these SPRs and Mitigation Measures would bring the potential impact of this project on this species to a less-than-significant level. The impact of the proposed project on this species is lower than that described within the PEIR.

7.1.5 Humboldt Marten (Martes caurina humboldtensis)

The Humboldt marten (*Martes caurina humboldtensis*) is State Endangered and Federally Threatened. This species is primarily found in old growth *Sequoia sempervirens* Forest Alliance coastal forests of northern California and southern Oregon. It relies on dense canopy cover, understory vegetation, and features like logs and snags for shelter and foraging. Major threats include habitat loss from logging, wildfires, and human development, as well as habitat fragmentation from roads and clear-cuts. Conservation efforts focus on preserving old-growth forests and maintaining habitat connectivity.

Potential Project Impacts

There is a CNDDB occurrence of this species in the Study Area, 0.5 miles southwest of Weott in Humboldt Redwoods State Park. In the Study Area, this species is most likely to occur in the *Sequoia sempervirens* Forest Alliance. Project activities such as mechanical thinning and

broadcast burns could potentially impact this species if operations are carried out during their denning season (spring to summer), which would increase the risk of direct mortality from prescribed fire. High-intensity burns could remove important downed logs, dense shrub cover, and standing snags used by martens for resting and denning, though low-intensity burns may be beneficial for maintaining habitat. Inclusion of SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2b would bring the potential impact of this project on this species to a less-than-significant level. This impact of the proposed project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.1.6 Northwestern Pond Turtle (Actinemys marmorata)

The northwestern pond turtle (*Actinemys marmorata*) is Federally Proposed Threatened and a CDFW Species of Special Concern. It occurs in freshwater habitats such as ponds, rivers, and wetlands across the Pacific Coast region. It relies on aquatic vegetation for food and basking sites like logs or rocks for thermoregulation. This turtle nests in upland areas with loose, sandy soils near water. Major threats include habitat loss, water pollution, invasive species, and road mortality. Conservation efforts focus on protecting aquatic and nesting habitats, reducing human impacts, and restoring wetlands.

Potential Project Impacts

Potential habitat for northwestern pond turtle such as ponds and wetlands will be avoided and marked. Project activities such as mechanical thinning and broadcast burns could potentially impact this species if conducted near riparian habitat leading to increased sedimentation affecting water quality and overall habitat health for the species. Therefore, SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2b are recommended. Incorporation of these SPRs and Mitigation Measures would bring the potential impact of this project on this species to a less-than-significant level. The impact of the proposed project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.1.7 Chinook Salmon California Coastal ESU (Oncorhynchus tshawytscha pop. 17)

The chinook salmon California Coastal Evolutionary Significant Unit (ESU) (*Oncorhynchus tshawytscha* pop. 17) is Federally Threatened. California Coastal chinook salmon range from as far north as Redwood Creek all the way to the Russian River as their southernmost extent. They are a fall-run salmon. Following early winter storms, they will swim upstream to return to their natal spawning grounds from September to November. Most juveniles will emerge from the gravel during late winter or spring and will slowly work their way downstream (Caltrout 2023). They will use floodplains or tidally influenced habitat with cover to forage until they are large enough to migrate out to sea. They will then spend the next year or two of their lives in the ocean feeding until they eventually return to the river in which they were born.

Potential Project Impacts

Several small creeks in the Mail Ridge area of southern Humboldt County provide potential habitat for the species. While there are no documented occurrences of this species in these smaller tributaries, it is highly likely that they serve as seasonal spawning and rearing habitat during high-flow conditions. Conducting thinning near any streams in the Study Area could increase sediment runoff, degrade water quality, and smother spawning habitats. No work will be taking place in

streams or waterways during this project and with the adoption of HYD-4 Watercourse and Lake Protection Zones (WLPZs) will be established along all streams and water bodies within the Study Area. To minimize potential impacts, SPRs BIO-1, BIO-2, BIO-10, and HYD-4, and MM BIO-2a have been included to ensure compliance with regulatory protections and maintain impacts at a less-than-significant level. These measures align with the PEIR and would not result in a substantially more severe impact than previously analyzed.

7.1.8 *Coho Salmon Southern Oregon/Northern California ESU (Oncorhynchus kisutch pop. 2)*

The coho salmon southern Oregon/northern California ESU (*Oncorhynchus kisutch* pop. 2) is Federally Threatened and State Threatened. Coho salmon are an anadromous fish with unique and complex life histories. They spend most of their adult lives in the ocean and return to freshwater streams and rivers to spawn. They spawn in cobble or gravel bottom streams with cold, highly oxygenated water, from November through January, though it can extend into February or March under drought conditions. The timing of spawning and migration varies by stream and/or flow (CalFish 2018). Eggs incubate in natal streams from November through April, and fry emerge between March and July, with peak emergence from March to May. Fry and juveniles rear in their natal streams and then emigrate to the ocean during the course of one year (CalFish 2018, NMFS 2016). Coastal lagoons and estuaries are important transitional habitat between freshwater and saltwater environments (NMFS 2016).

Potential Project Impacts

Coho salmon are known to occur within the Eel River and are highly likely to use small creeks in the Study Area as spawning grounds. Conducting thinning near any streams in the Study Area could increase sediment runoff, degrade water quality, and smother spawning habitats. No work will be taking place in streams or waterways during this project and with the adoption of HYD-4 WLPZs will be established along all streams and water bodies within the Study Area. The implementation of SPRs BIO-1, BIO-2, BIO-10, and HYD-4, and MM BIO-2a will bring the potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.1.9 Steelhead Northern California DPS Summer-run (Oncorhynchus mykiss irideus pop. 48)

The northern California Distinct Population Segment (DPS) summer-run steelhead (*Oncorhynchus mykiss irideus* pop. 48) are Federally Threatened and State Endangered. Northern California summer-run steelhead range from Redwood Creek as their northern extent all the way south to the Gualala River. Steelhead are an anadromous fish with unique and complex life histories. They spend most of their adult lives in the ocean and return to freshwater streams and rivers to spawn (CalFish 2018). They spawn in cobble or gravel bottom streams with cold, highly oxygenated water from December through April. The majority of adult steelhead die after spawning, though some return to the ocean and may spawn for multiple years (NMFS 2016). Fry and juveniles inhabit pools and riffles in the streams while they grow, typically emigrating to the ocean after one to three years (CalFish 2018, NMFS 2016). Coastal lagoons and estuaries are also important in the lifecycle of a steelhead, as they provide transitional habitat between freshwater and saltwater environments (NMFS 2016).

Potential Project Impacts

The Eel River is an incredibly important waterway for the northern California summer-run steelhead. They use many tributaries to the Eel River as spawning grounds. Conducting thinning near any streams in the Study Area could increase sediment runoff, degrade water quality, and smother spawning habitats. No work will be taking place in streams or waterways during this project and with the adoption of HYD-4 WLPZs will be established along all streams and water bodies within the Study Area. The implementation of SPRs BIO-1, BIO-2, BIO-10, and HYD-4, and MM BIO-2a will bring the potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.1.10 Steelhead Northern California DPS Winter-run (Oncorhynchus mykiss irideus pop. 49)

The northern California DPS winter-run steelhead (*Oncorhynchus mykiss irideus* pop. 49) are Federally Threatened and are a CDFW Species of Special Concern. These anadromous fish migrate from the ocean into freshwater systems to spawn. Winter-run steelhead typically enter rivers and streams from November through April as mature adults, spawning shortly after arrival. Summer-run steelhead enter freshwater earlier, between May and October, and may hold in freshwater for several months before spawning.

Potential Project Impacts

The Eel River is an incredibly important waterway for the northern California winter-run steelhead. They use many tributaries to the Eel River as spawning grounds. Conducting thinning near any streams in the Study Area could increase sediment runoff, degrade water quality, and smother spawning habitats. No work will be taking place in streams or waterways during this project and with the adoption of HYD-4 WLPZs will be established along all streams and water bodies within the Study Area. The implementation of SPRs BIO-1, BIO-2, BIO-10, and HYD-4, and MM BIO-2a will bring the potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.2 Non-listed Special-Status Animal Species

7.2.1 Golden Eagle (Aquila chrysaetos)

Golden Eagles (*Aquila chrysaetos*) are a CDFW Fully Protected species and are on the CDFW Watch List. They are the largest raptors in North America, with a powerful beak and massive claws for subduing their prey. Golden eagle pairs maintain territories that can be as large as 60 square miles. Habitat preferences are for rolling hills, grasslands, chaparral, and oak woodlands. They prey on mammals, other birds, and reptiles. They prefer to nest at the highest point within their region, often selecting cliffs and the tops of trees. They build large nests, which they may return to in subsequent breeding years. The timing of mating and egg-laying for golden eagles is variable depending on locality. Females lay one to four eggs, and both parents incubate them for 40 to 45 days. Populations have undergone slight declines because of human disturbance, habitat loss, and loss of prey, although current populations seem to be relatively stable.

Potential Project Impacts

There are multiple CNDDB occurrences of this species within the Study Area. Grasslands within the Study Area provide suitable foraging habitat and the large trees present may provide suitable nesting habitat. If Project activities commence during nesting/breeding season, nesting Golden Eagles could be harmed or active nests could be abandoned. Ultimately, this project is expected to increase the quality of nesting and foraging habitat for this species. Therefore, the inclusion of SPRs BIO-1, BIO-2, BIO-4, and BIO-10, and MM BIO-2a will bring the potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.2.2 Northern California Ringtail (Bassaricus atutus raptor)

The Northern California ringtail (*Bassariscus astutus raptor*) is a CDFW Fully Protected species. This species is a small, nocturnal mammal related to raccoons, which inhabits diverse habitats including oak woodlands, chaparral, riparian zones, and rocky canyons across the region. Known for its agility and long, striped tail, the ringtail thrives in areas with abundant shelter and prey such as insects, rodents, and fruits. Despite being adaptable, the species faces threats from habitat loss due to urban development, logging, and wildfires, as well as road mortality and reduced water quality in riparian environments. Conservation efforts focus on preserving its habitat and mitigating human-wildlife conflicts to ensure its survival in Northern California.

Potential Project Impacts

Project activities such as mechanical thinning and broadcast burns could potentially impact this species. Burning during denning season (spring-early summer) could lead to mortality of juveniles that are unable to escape. There could also be loss of denning sites (hollow trees, snags and large downed trees) due to mechanical/manual thinning forcing individuals to relocate. The inclusion of SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2b will bring the potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.2.3 Foothill Yellow-legged Frog North Coast DPS (Rana boylii pop. 1)

The foothill yellow-legged frog (FYLF) North Coast DPS (*Rana boylii* pop. 1) is a CDFW Species of Special Concern. FYLF prefers partly shaded, shallow streams and riffles with a rocky substrate that is at least cobble-sized. They occur in streams and rivers in woodlands, chaparral, and forest habitats (Stebbins 2012). FYLF diet consists of various invertebrates, including flying, terrestrial, and aquatic insects such as grasshoppers, spiders, and snails. Tadpoles are known to graze the surfaces of rocks and vegetation consuming algae and detritus (Ashton et al. 1998). Breeding occurs between mid-March and early June after the high water of streams subsides (Stebbins 2012). Unlike other ranid frogs, mating and egg-laying occur exclusively in rivers and streams, not in ponds or lakes. Small clusters of eggs are deposited on the downstream sides of rocks in shallow, slow-moving water. Eggs hatch within 5-37 days, depending on water temperature. Larvae remain close to the egg mass for about one week after hatching and will take 3-4 months to metamorphose, typically between July and October. Once metamorphosed, frogs typically migrate upstream of their hatching site (Fuller and Lind 1992).

Potential Project Impacts

There are multiple CNDDB occurrences of this species within the Study Area on the upper mainstem of the Eel River and its tributaries. Creeks and other small drainages within the Study Area may provide suitable habitat for this species. Upland habitats around creeks could provide dispersal habitat during the rainy season (November-May). Since this species could be present within a variety of different habitats throughout the treatment areas while dispersing, there is no feasible way to avoid all potentially suitable habitat for these species. However, fuels reduction activities, including removal of invasive and non-native vegetation and fuel load reduction, as well as revegetation with native species, are likely to improve habitat for the species. Therefore, the inclusion of SPRs BIO-1, BIO-2, BIO-9, BIO-10, HYD-4, and GEO-1, and MM BIO-2b will be sufficient to protect this species. Incorporation of these SPRs and mitigation measures would bring the potential impact of the Project on this species to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.4 Pacific Tailed Frog (Ascaphus truei)

The Pacific tailed frog (*Ascaphus truei*) is a CDFW Species of Special Concern. This species prefers cold water streams that flow year-round in steep-walled valleys with dense vegetation. They occur in undisturbed conifer forests with clean, cold watersheds (Jennings and Hayes 1994). During the day, adults will seek cover under rocks and logs that are submerged. They will occasionally be found under surface objects that are close to the stream. Adults primarily forage terrestrially along stream banks but occasionally feed underwater. They will eat larval and adult insects, arthropods, and snails (Metter 1964). Breeding occurs underwater from April to October. Eggs are laid several months later in masses attached to the underside of rocks (Nussbaum et al. 1983). Eggs will typically hatch after a month of being laid. The aquatic larvae require 2 to 3 years to metamorphose, which typically occurs in fall (ibid). Larvae are equipped with a sucking appendage to affix themselves to the undersides of rocks with the cool, fast-flowing creeks they inhabit.

Potential Project Impacts

Since this species could be present within a variety of different habitats throughout the treatment areas, there is no feasible way to avoid all potentially suitable habitat for these species. However, treatment activities, including removal of invasive and non-native vegetation and fuel load reduction, as well as revegetation with native species and loading of large wood into creek systems, are likely to improve habitat for the species. Therefore, the inclusion of SPRs BIO-1, BIO-2, BIO-9, BIO-10, HYD-4, and GEO-1, and MM BIO-2b will bring the potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.2.5 Southern Torrent Salamander (Rhyacotriton variegatus)

The southern torrent salamander is a CDFW Species of Special Concern. It is a small amphibian native to the Pacific Northwest, found in cool, clear, fast-flowing streams within dense coastal forests from southern Oregon to northern California. Strongly associated with old-growth and mature forests, this species depends on stable, moist microclimates and rocky substrates. Measuring 2.5–5 inches in length, the salamander has an olive to brown back and a yellow-to-

orange belly with black speckling. It is lungless, relying on skin and mouth lining for respiration, and its larvae require cool, oxygen-rich water. Major threats include habitat loss from logging, water quality degradation from pollution and sedimentation, climate change, and human disturbance. Conservation efforts focus on protecting old-growth forests and maintaining pristine stream habitats critical to their survival.

Potential Project Impacts

Since this species could be present within various habitats throughout the treatment areas, there is no feasible way to avoid all potentially suitable habitat for these species. However, treatment activities, including removal of invasive and non-native vegetation and fuel load reduction, as well as revegetation with native species and loading of large wood into creek systems, are likely to improve habitat for the species. Therefore, the inclusion of SPRs BIO-1, BIO-2, BIO-9, BIO-10, HYD-4, and GEO-1, and MM BIO-2b will bring potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.2.6 Northern Red-legged Frog (Rana aurora)

The northern red-legged frog (*Rana aurora*) is a CDFW Species of Special Concern. This species is a medium-sized amphibian native to northern California, inhabiting cool, moist environments such as forests, wetlands, ponds, and slow-moving streams. Preferring areas with dense vegetation for shelter and breeding, this frog is most active in the rainy season. Its population is threatened by habitat loss and degradation due to urbanization, agriculture, and logging, as well as invasive species like bullfrogs and predatory fish that compete for resources or prey on juveniles. Climate change and prolonged droughts further exacerbate these pressures, underscoring the need for wetland conservation and ecosystem restoration to protect this sensitive species.

Potential Project Impacts

There are CNDDB occurrences of this species in the Study Area along Whitlow Rd, 1.2 miles northeast of its intersection with Dyerville Loop Rd. Project activities such as mechanical thinning and broadcast burns could potentially impact this species. Therefore, SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2b are recommended. Incorporation of these SPRs and mitigation measures would bring the potential impact of this Project on this species to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.7 Cooper's Hawk (Accipiter cooperii)

The Cooper's Hawk (*Accipiter cooperii*) is on the CDFW Watch List. Over the past 50 years, Cooper's Hawks' breeding numbers have decreased due to the degradation and destruction of their nesting habitat, in addition to the bioaccumulation of pesticides (Grindrod and Walton, Polite 1988). This species tend to nest in deciduous trees, around 20-50 feet above ground, often next to streams, rivers, creeks, or other riparian habitat. They are also commonly found in wooded suburban areas (including parks, quiet neighborhoods, fields, and busy streets with sufficient tree cover). Cooper's Hawks often prefer more patchy stands of trees for perching (Polite 1988).

Potential Project Impacts

Pseudotsuga menziesii - *(Notholithocarpus densiflorus* - *Arbutus menziesii*) Forest and Woodland Alliance within the Study Area could provide nesting habitat for this species. Fuels reduction activities could cause nesting birds to abandon their nests, possibly resulting in loss of chicks or eggs. However, the inclusion of SPRs BIO-1, BIO-2, BIO-4, and BIO-10, and MM BIO-2a will bring potential impacts to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.8 Vaux's Swift (Chaetura vauxi)

Vaux's Swift is a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern. It is a small, agile bird known for its rapid, fluttering flight and reliance on communal roosts. This species is primarily found in North and Central America, inhabiting forests and wooded areas where old-growth trees and large snags provide cavities for nesting and roosting. During migration, they are also known to roost in chimneys, incorporating urban areas into their habitats. Vaux's Swift faces threats from deforestation, logging of old-growth forests, and the sealing of chimneys, which reduce the availability of suitable roosting and nesting sites, especially along migratory corridors. Conservation efforts focus on preserving forest habitats and promoting chimney designs that accommodate their roosting needs.

Potential Project Impacts

Pseudotsuga menziesii - *(Notholithocarpus densiflorus* - *Arbutus menziesii*) Forest and Woodland Alliance within the Study Area could provide nesting habitat for this species. Fuels reduction activities could cause nesting birds to abandon their nests, possibly resulting in loss of chicks or eggs. However, the inclusion of SPRs BIO-1, BIO-2, BIO-4, and BIO-10, and MM BIO-2a will bring potential impacts to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.9 Yellow-breasted Chat (Icteria virens)

The Yellow-breasted Chat is a CDFW Species of Special Concern. This species is a brightly colored songbird with a striking yellow breast, olive-green back, and white spectacles around its eyes. It inhabits dense, shrubby areas such as riparian thickets, forest edges, and overgrown fields across North America, particularly in the southern and central United States during the breeding season. They prefer habitats with abundant cover for nesting and foraging, often near water. Despite their wide distribution, Yellow-breasted Chats face significant threats from habitat loss and degradation due to urban development, agriculture, and the destruction of riparian zones. Conservation efforts focus on protecting and restoring their natural habitats to ensure the species' long-term survival.

Potential Project Impacts

Dense riparian thickets and shrubby areas within the Study Area could provide nesting habitat for this species. Fuels reduction activities could cause nesting birds to abandon their nests, possibly resulting in loss of chicks or eggs. However, the inclusion of SPRs BIO-1, BIO-2, BIO-4, and BIO-10, and MM BIO-2a will bring potential impacts to a less-than-significant level. The impact

of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.10 Yellow Warbler (Setophaga petechia)

The Yellow Warbler is a CDFW Species of Special Concern that inhabits riparian woodlands, marshes, and shrubby areas near water. Its main threats include habitat loss, wetland drainage, cowbird parasitism, and climate change. Conservation efforts focus on preserving wetlands and managing cowbird populations.

Potential Project Impacts

Large trees, particularly riparian-associated species, within the Study Area could provide nesting habitat for this species. Fuels reduction activities could cause nesting birds to abandon their nests, possibly resulting in loss of chicks or eggs. However, the inclusion of SPRs BIO-1, BIO-2, BIO-4, and BIO-10, and MM BIO-2a will bring potential impacts to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.11 Olive-sided Flycatcher (Contopus cooperi)

The Olive-sided Flycatcher is a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern. It is a medium-sized migratory songbird characterized by its dark flanks, white belly, and distinctive "quick, three beers!" song. It breeds in coniferous forests and mixed woodlands, particularly in areas with open spaces and tall perches such as snags or dead trees, which it uses for hunting flying insects. The species winters in montane forests of Central and South America. Despite its wide range, the Olive-sided Flycatcher is in decline, primarily due to habitat loss and degradation from logging, agriculture, and urbanization, as well as reduced insect prey caused by pesticide use. Climate change and deforestation in its wintering grounds further threaten the species. Conservation efforts focus on protecting forest habitats across its range and promoting sustainable forestry practices.

Potential Project Impacts

Pseudotsuga menziesii - *(Notholithocarpus densiflorus* - *Arbutus menziesii*) Forest and Woodland Alliance within the Study Area could provide nesting habitat for this species. Fuels reduction activities could cause nesting birds to abandon their nests, possibly resulting in loss of chicks or eggs. However, the inclusion of SPRs BIO-1, BIO-2, BIO-4, and BIO-10, and MM BIO-2a will bring potential impacts to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.12 Pallid Bat (Antrozous pallidus)

The pallid bat (*Antrozous pallidus*) is a CDFW Species of Special Concern. It thrives in arid regions, grasslands, oak woodlands, and desert scrub, often roosting in caves, rock crevices, and old buildings. Known for its large ears and pale coloration, the pallid bat is a gleaning predator, feeding primarily on ground-dwelling insects like crickets and scorpions. This species faces significant threats, including habitat loss due to urbanization, agricultural expansion, and cave disturbances from human activity. Pesticide use also reduces its prey availability and poses toxic

risks. Conservation efforts focus on protecting roosting sites and promoting pesticide-free practices to support its survival.

Potential Project Impacts

Pseudotsuga menziesii - *(Notholithocarpus densiflorus* - *Arbutus menziesii*) Forest and Woodland Alliance within the Study Area could provide suitable habitat for this species. If project activities commence during the breeding season of the pallid bat it could result in the loss of this species. However, the inclusion of SPRs BIO-1, BIO-2, BIO-4, and BIO-12, and MM BIO-2b will bring potential impacts to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.13 Sonoma Tree Vole (Arborimus pomo)

The Sonoma tree vole (*Arborinus pomo*) is a CDFW Species of Special Concern. This species is distributed along the Pacific coast from Sonoma County to the Oregon border. The Sonoma tree vole prefers old-growth and large-stand forests, mostly restricted to the Pacific fog belt. Males will build a nest in the tree composed of fir needles; less commonly, they will nest in burrows at the base of the tree. Females spend most of their lives in the tree, creating large, domed nursery nests out of fir needles. Nests can be used by multiple generations, with each generation adding onto the nest. They breed from February to September, with litter sizes ranging from 1-4 individuals. They specialize in consuming Douglas-fir and grand fir (*Abies grandis*) needles, which are foraged at night and eaten while foraging or brought back to the nest for future consumption (Maser 1965, Maser et al. 1981).

Potential Project Impacts

There is one CNDDB occurrence within the Study Area just east of Rolph Grove in Humboldt Redwoods State Park. Project activities such as mechanical thinning and broadcast burns could potentially impact breeding nests of this species by removing or thinning large conifers that may be supporting active nests. Burning impacts from flame height, high temperatures, and smoke could harm or displace tree voles, particularly juveniles in active nests. Suitable habitat for this species is present within the Study Area. The inclusion of SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2b is recommended. Incorporation of these SPRs and mitigation measures would bring the potential impact of this Project on this species to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.14 American Badger (Taxidea taxus)

The American badger (*Taxidea taxus*) is a CDFW Species of Special Concern due to population decline in California. The primary threat to this species is habitat conversion, as much of its habitat has been lost to agriculture and urban development. Other threats include heavy traffic volume (which leads to road kills), indiscriminate trapping and poisoning, and a reduction in prey base because of rodent control (Ahlborn 2005). This species has experienced significant population declines over the past century, particularly in southern California (Williams 1986). American badgers require friable soils for digging burrows, and their presence can often be determined by the presence of burrows with large openings. Badgers are carnivorous and feed primarily on small

rodents but also consume reptiles, insects, birds and bird eggs, and carrion (Ahlborn 2005). Their stout bodies, powerful forelimbs, and long curved claws allow badgers to capture their prey in burrows. Individuals, especially males, are known to occupy relatively large home ranges, from approximately 480 to nearly 3,000 acres (Quinn 2008). Badgers are solitary except during their breeding season (July-August). In March, females will give birth to 1-5 babies in underground nests lined with grass.

Potential Project Impacts

Project activities such as mechanical thinning and broadcast burns could potentially impact this species. The treatment area provides suitable habitat for this species to den. The inclusion of SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2b will bring potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.2.15 Fisher (Pekania pennanti)

The fisher is a CDFW Species of Special Concern. They are solitary mustelids that live in coniferous forests and riparian habitats with dense canopy closure (Schempf and White 1977). They breed in shelters formed by brush piles and cavities in trees, snags, logs, or large rocks. Young are born from February through May, with litters averaging 1-4 individuals. The young remain with the female until late fall, when they separate and go their own ways. Fishers are mostly carnivorous, eating rabbits, hares, and a variety of rodents. They will also eat birds and fruits during certain times of the year.

Potential Project Impacts

There is a CNDDB occurrence of this species in the Study Area, 2.2 miles south of Whitlow Rd. Project activities such as mechanical thinning and broadcast burns could potentially impact this species during their breeding season (late February to early May) with the potential removal of trees with cavities that could support juveniles. Therefore, measures SPRs BIO-1, BIO-2, and BIO-10, and MM BIO-2b are recommended. Incorporation of these SPRs and mitigation measures would bring the potential impact of this Project on this species to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.2.16 Pacific Lamprey (Entosphenus tridentatus)

Pacific lamprey is a CDFW Species of Special Concern. Pacific lamprey spend most of their lives in the Pacific Ocean. Adults migrate to freshwater rivers and streams to spawn. Juveniles will spend 3-7 years in freshwater as a larval stage, known as ammocoetes, where they reside in the substrate and filter feed on detritus, diatoms, and algae (Hammond 1979). Adults are parasitic on fish and smooth skinned marine mammals, attaching and feeding on body fluids and blood (Goodman and Reid 2012). They face a variety of threats, including artificial barriers to migration, entrainment of migrating juveniles, desiccation of stream habitat, poor water quality, predation by native or non-native species, dredging, and loss of estuarine habitat (Goodman and Reid 2012).

Potential Project Impacts

The Eel River watershed is known to support Pacific lamprey. If fuels reduction activities affect water quality, Pacific lamprey could be impacted. Therefore, the inclusion of SPRs BIO-1, BIO-2, BIO-4, and HYD-4, and MM BIO-2b will bring potential impacts to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.2.17 *Townsend's Big-eared Bat (Corynorhinus townsendii)*

Townsend's big-eared bat (*Corynorhinus townsendii*) is a CDFW Species of Special Concern. This species is found in nearly all habitats except subalpine and alpine habitats throughout California. They roost in caves, mines, tunnels, buildings, or other human-made structures, and sometimes large hollows of trees. They are generally found in dry uplands but also occur in mesic habitats such as coniferous and deciduous forests. Townsend's big-eared bat is extremely sensitive to disturbance of roosting sites. Their relatively poor (compared to other bat species) urine-concentrating abilities result in a higher need of proximity to water when selecting roosting sites. They primarily prey on moths but also consume smaller, soft-bodied insects.

Potential Project Impacts

It is possible that Project activities such as mechanical thinning and broadcast burning could potentially impact roosting sites for this species. However, since the Project is requiring biological resource training for workers (SPR BIO-2), focused visual surveys for bat maternity roosts prior to treatment activities (SPR BIO-10), and establishment of a no-disturbance buffer around any observations of this species (MM BIO-2b), this Project is expected to have a less-than-significant impact on this species. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.2.18 Western Red Bat (Lasiurus frantzii)

The western red bat (*Lasiurus frantzii*) is a CDFW Species of Special Concern. It has fluffy, rusty-colored fur with white fur patches on its shoulders (Batcon 2024). It roosts solitarily or in small clusters in trees, rarely, if ever, using other roosting sites. It is especially dependent on riparian trees for roosting. It feeds on insects, including cicadas, moths, and ants. While it roosts in trees, it primarily forages in open areas, including around streetlights, which attract flying insects. Mating occurs in late fall, during which gestation is delayed until May and June, when twins are birthed (ibid).

Potential Project Impacts

2024 spring surveys conducted by U.S. Forest Service staff documented this species within close proximity to the Study Area. It is possible that Project activities such as mechanical thinning and broadcast burning could potentially impact roosting sites for this species. However, since the Project is requiring biological resource training for workers (SPR BIO-2), focused visual surveys for bat maternity roosts prior to treatment activities (SPR BIO-10), establishment of a no-disturbance buffer around any observations of this species (MM BIO-2b), and avoidance of wetlands (MM BIO-4) and environmentally sensitive places (SPR AD-2), this Project is expected to have a less-than-significant impact on this species, consistent with the PEIR.

7.3 Migratory and Nesting Birds

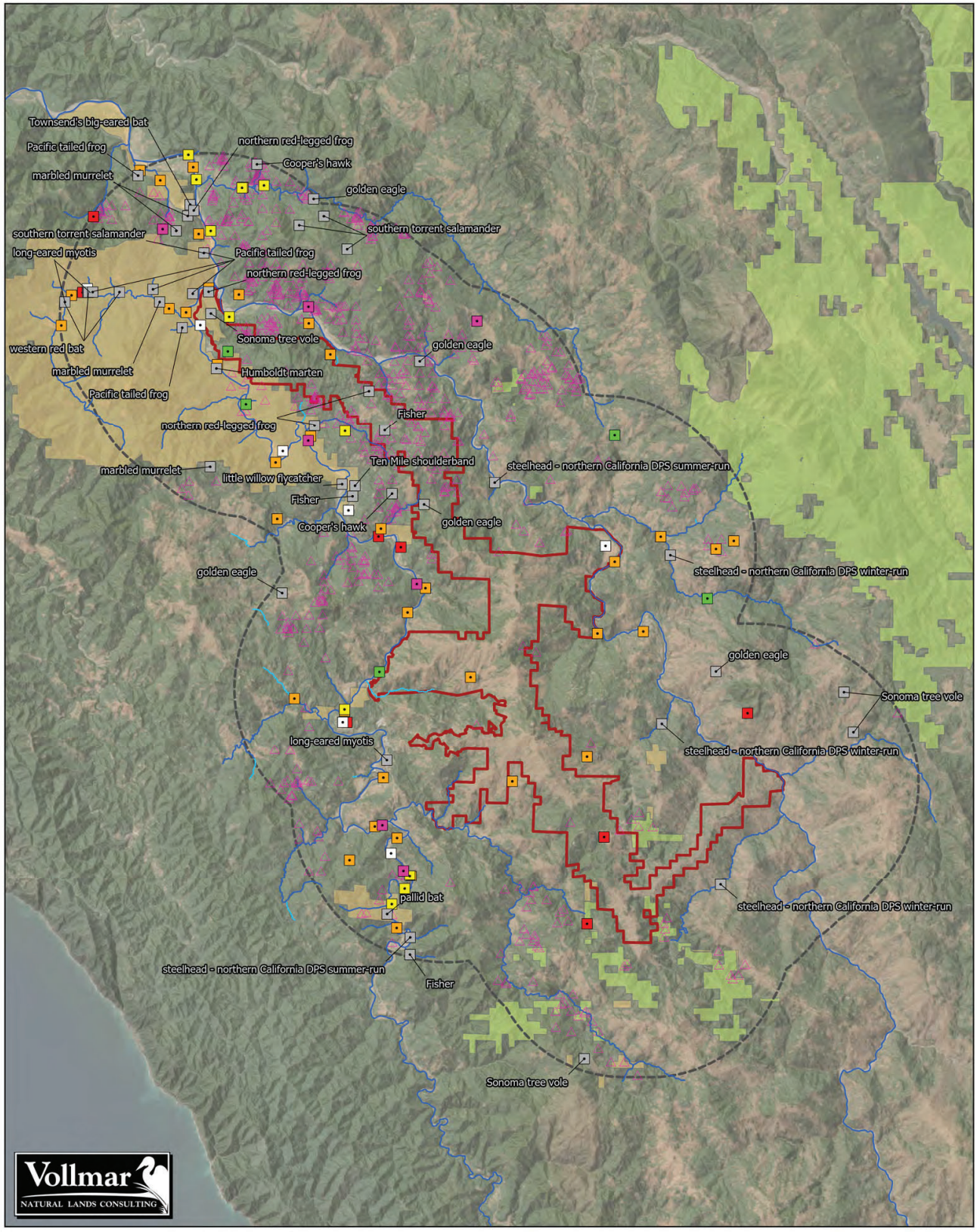
The Migratory Bird Treaty Act (16 U.S.C. 704) and the California Fish and Game Code (Section 3503) prohibit the take of migratory birds as well as disturbance to the active nests of most native birds. These protections extend to all native birds in California, with notable exceptions being nests of invasive European starling (*Sturnus vulgaris*) and house sparrow (*Passer domesticus*). As stated previously, the trees in the Study Area could support nests of multiple migratory bird species, including raptors and listed species. Equipment-related noise could result in the abandonment of an active nest in trees adjacent to the Study Area.

Potential Project Impacts

Project activities such as mechanical thinning, manual thinning, pile burning, and broadcast burning that take place during the nesting season have the potential to cause harm to nesting birds, chicks, and eggs due to loss of habitat and sound exposure from equipment. This impact will be mitigated by SPRs BIO-1, BIO-2, and BIO-12. Incorporation of these SPRs and Mitigation Measures would bring the potential impact of this Project on this species to a less-than-significant level. The impact of the proposed Project on this species is consistent with the PEIR and would not constitute a more significant impact than what is described in the PEIR.

7.4 Designated Critical Habitat

As shown in **Figure 4**, critical habitat for the Northern Spotted Owl is located in the southern portion of the Study Area. Critical habitat for the Marbled Murrelet is found in the northernmost reach of the Study Area as well as in the southern extent near the Humboldt-Mendocino County line. Both species can be found in the *Sequoia sempervirens* Forest Alliance Habitat. According to National Oceanic and Atmospheric Administration Fisheries, the Study Area also includes essential fish habitat for both Chinook and Coho salmon.



Vollmar NATURAL LANDS CONSULTING

Legend

CNDDB Special-status Animals

- North American porcupine
- foothill yellow-legged frog - north coast DPS
- northwestern pond turtle
- obscure bumble bee
- osprey
- western bumble bee
- Other Special-status Animals
- Northern Spotted Owl

NMFS Stream Critical Habitat (ESA)

- Chinook Salmon
- Steelhead

NOAA Essential Fish Habitat (MSA)

*All Project Study Area is within Coho and Chinook salmon EFH

Critical Habitat

- Marbled murrelet
- Northern spotted owl

Project Study Area

- Project Study Area
- Project Study Area 5 mile buffer

Data Sources: CNDDB, Nov. 2024 | Humboldt GIS, 2024 | NOAA, 2025 | Esri World Imagery & Hillshade, 2025
Cartography by S. Wrigley 05/12/2025
Map File: 629_MailRidge_AllMapsProject.mxd

FIGURE 4
Special-status Wildlife Map

Mail Ridge Forest Health and Wildfire Resilience Project
Humboldt County, California

N W E S

1:221,760

0 3 6 12 Kilometers

0 1.75 3.5 7 Miles

7.5 Special-status Plant Species

This section describes all special-status plant species with potential to occur within the Study Area and sensitive habitats present within it. Recommended avoidance and/or minimization measures to reduce the potential for the Project to impact these species or sensitive habitats are described below, in accordance with CalVTP protocols. Only Federally or State listed and/or special-status species with the potential to occur within the Study Area are discussed in detail below; the remaining special-status plant species known from the region are detailed in **Appendix B** and shown on **Figure 5**.

7.5.1 Scabrid alpine tarplant (Anisocarpus scabridus)

The scabrid alpine tarplant (*Anisocarpus scabridus*) has a CRPR of 1B.3. It is a perennial herb that grows in high-elevation habitats, including alpine and subalpine meadows, rocky outcrops, and open slopes. This species thrives in well-drained soils and is adapted to harsh mountain conditions. Blooming from July to September, it produces small yellow composite flowers that attract native pollinators. The scabrid alpine tarplant is primarily found in the northern Sierra Nevada and southern Cascade Range. Threats to this species include climate change, habitat disturbance, and competition from invasive plants.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species through habitat fragmentation as a product of reducing fuel load. This can isolate populations, in turn making them more vulnerable. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.2 Humboldt County milk-vetch (Astragalus agnicidus)

The Humboldt County milk-vetch (*Astragalus agnicidus*) is State Endangered and has a CRPR of 1B.1. This rare perennial herb is endemic to Humboldt County, where it inhabits disturbed sites within coastal coniferous forests, often regenerating after fire or logging. It produces compound leaves and pale purple to pinkish flowers that bloom from May to August. The species is known for its ability to persist in seed banks and re-emerge following soil disturbance. Threats include habitat loss, competition with invasive species, and changes in fire regimes. Conservation efforts focus on habitat protection and promoting natural disturbance processes that support its regeneration.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1a would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.3 Northern clustered sedge (*Carex arcta*)

The northern clustered sedge (*Carex arcta*) has a CRPR of 2B.2. This perennial graminoid grows in moist to wet habitats, including riparian woodlands, wet meadows, and forested swamps. It is typically found at low to mid-elevations in northern California, where it forms dense clumps with slender stems and narrow leaves. Blooming from May to July, it produces small, clustered spikelets characteristic of the *Carex* genus. The species is primarily threatened by habitat loss, hydrological alterations, and competition from invasive plants. Conservation efforts focus on maintaining wetland ecosystems and protecting riparian corridors.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HYD-1, and HYD-4, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.4 Northern meadow sedge (*Carex praticola*)

The northern meadow sedge (*Carex praticola*) has a CRPR of 2B.2. This perennial sedge grows in moist meadows, riparian areas, and forested wetlands at low to mid-elevations. It forms dense clumps with narrow leaves and produces small, inconspicuous flowers from May to July. The species is distributed across northern California and other western North American regions, often found in areas with seasonal moisture. Threats to northern meadow sedge include habitat degradation, changes in hydrology, and encroachment by invasive species. Conservation efforts focus on protecting wet meadow ecosystems and maintaining natural water flow regimes.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HYD-1, and HYD-4, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.5 Giant fawn lily (*Erythronium oregonum*)

The giant fawn lily (*Erythronium oregonum*) has a CRPR of 2B.2. This perennial herb grows in moist, shaded habitats, including oak woodlands, coniferous forests, and grassy meadows at low to mid-elevations. It is recognized for its striking white to pale yellow flowers with recurved petals and mottled, lance-shaped leaves that resemble a fawn's coat. Blooming from March to May, the giant fawn lily relies on pollinators such as bees and butterflies. Threats to this species include habitat loss, forest management practices, and invasive plant competition. Conservation efforts focus on protecting woodland and meadow ecosystems where it thrives.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.6 Coast fawn lily (Erythronium revolutum)

The coast fawn lily (*Erythronium revolutum*) has a CRPR of 2B.2. This perennial herb thrives in moist, shaded environments such as riparian woodlands, coniferous forests, and wet meadows at low elevations. It is distinguished by its delicate pink to purple flowers with recurved petals and its characteristic mottled green leaves. Blooming from March to May, the coast fawn lily depends on native pollinators including bees and butterflies. Major threats to this species include habitat loss, logging, and competition from invasive species. Conservation efforts focus on protecting riparian and forested habitats where it naturally occurs.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HYD-1, and HYD-4, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.7 Pacific gilia (Gilia capitata ssp. pacifica)

The Pacific gilia (*Gilia capitata* ssp. *pacifica*) has a CRPR of 1B.2. This annual herb grows in coastal bluffs, dunes, and open grasslands, primarily in well-drained sandy or rocky soils. It produces showy, rounded clusters of pale blue to lavender flowers that bloom from April to July, attracting a variety of pollinators, including bees and butterflies. The species is adapted to disturbance but is threatened by habitat loss, coastal development, and competition from invasive plants. Conservation efforts focus on preserving coastal ecosystems and managing invasive species that encroach on its habitat.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.8 Water howellia (Howellia aquatilis)

The water howellia (*Howellia aquatilis*) is a rare aquatic plant with a CRPR of 2B.2 and was formerly listed as Federally Threatened. This annual herb grows in seasonal wetlands, ponds, and slow-moving waters, often in areas that dry out partially during the summer. It produces small, pale lavender to white flowers that bloom from May to August, relying on self-pollination and

water dispersal for reproduction. The species is highly sensitive to changes in hydrology, with threats including wetland drainage, water diversion, and competition from invasive aquatic plants. Conservation efforts focus on protecting wetland habitats and maintaining natural hydrological cycles.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HYD-1, and HYD-4, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.9 Small groundcone (Kopsiopsis hookeri)

The small groundcone (*Kopsiopsis hookeri*) has a CRPR of 2B.3. This perennial, parasitic herb lacks chlorophyll and depends entirely on host plants, particularly species in the heath family (*Ericaceae*), such as manzanitas (*Arctostaphylos* spp.) and madrones (*Arbutus* spp.). It emerges from the soil as a small, cone-like structure with purple to reddish-brown overlapping bracts, resembling a pinecone. Blooming from May to August, it produces inconspicuous flowers that rely on insects for pollination. The species inhabits forested areas with well-drained soils and is threatened by habitat loss, logging, and land development. Conservation efforts focus on protecting host plant communities and maintaining undisturbed forest understories.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.10 Howell's montia (Montia howellii)

Howell's montia (*Montia howellii*) has a CRPR of 2B.2. This perennial herb is typically found in moist, shaded environments, such as riparian zones, wet meadows, and moist forest floors, often in the foothills of the Klamath Mountains and other coastal ranges. It produces small, white to pink flowers and fleshy, succulent-like leaves that are characteristic of the genus. Blooming from May to July, the species relies on pollinators like bees for reproduction. Threats to Howell's montia include habitat loss due to development, logging, and changes in water availability. Conservation efforts focus on habitat protection and ensuring the persistence of its wetland habitats.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HYD-1, and HYD-4, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the

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

7.5.11 Baker's navarretia (Navarretia leucocephala ssp. bakeri)

Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*) has a CRPR of 1B.1. This annual herb is found in vernal pools, grasslands, and other seasonally moist habitats, primarily in the central and northern parts of California. It features showy, white to lavender flowers with a distinctive cone-like center, blooming from April to June. The species is adapted to the ephemeral nature of vernal pools, thriving during the wet season and completing its life cycle before the pools dry out. Threats include habitat loss due to urbanization, agricultural expansion, and invasive species. Conservation efforts focus on protecting vernal pool ecosystems and managing the hydrology that supports this species.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HYD-1, and HYD-4, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.12 Seacoast ragwort (Packera bolanderi var. bolanderi)

Seacoast ragwort (*Packera bolanderi* var. *bolanderi*) has a CRPR of 2B.2. This perennial herb typically grows in coastal habitats, including rocky cliffs, bluffs, and coastal grasslands, often in areas with well-drained soils and exposed conditions. It produces yellow composite flowers that bloom from May to September, attracting a variety of pollinators such as bees and butterflies. The seacoast ragwort is threatened by habitat loss due to coastal development, erosion, and competition from invasive species. Conservation efforts focus on protecting coastal habitats and ensuring the stability of its growing environments.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.13 White-flowered rein orchid (Piperia candida)

The white-flowered rein orchid (*Piperia candida*) has a CRPR of 1B.2. This perennial orchid is typically found in grasslands, oak woodlands, and coniferous forests at low to mid-elevations. It thrives in well-drained, often slightly disturbed soils and blooms from June to August, producing spikes of striking white to pale greenish flowers that resemble rein orchids. The species is reliant on pollinators, particularly bees, for successful reproduction. Major threats to the species include habitat loss, invasive species, and changes in fire regimes. Conservation efforts focus on habitat protection and maintaining the ecological balance of the grasslands and woodlands it inhabits.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.14 North Coast semaphore grass (Pleuropogon hooverianus)

North Coast semaphore grass (*Pleuropogon hooverianus*) is a critically endangered California native plant with a CRPR of 1B.1 and is listed as State Threatened**.** This perennial grass is found in moist, low-elevation habitats, including freshwater wetlands, riparian areas, and vernal pools, primarily along the northern California coast. It features distinctive, pendulous inflorescences that resemble semaphore flags, hence its name. Blooming from May to July, it relies on wetland conditions for reproduction and is highly sensitive to changes in water availability. Threats to this species include habitat loss due to agricultural development, drainage of wetlands, and invasive species. Conservation efforts focus on habitat preservation and restoration of wetland ecosystems where it thrives.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HYD-1, and HYD-4, and MM BIO-1a would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.15 Siskiyou checkerbloom (Sidalcea malviflora ssp. patula)

The Siskiyou checkerbloom (*Sidalcea malviflora* ssp. *patula*) has a CRPR of 1B.2. This perennial herb is primarily found in the Siskiyou Mountains and other parts of Northern California, where it grows in moist meadows, riparian areas, and disturbed grassy slopes. It produces showy, magenta to pink flowers that bloom from May to July, attracting a variety of pollinators such as bees and butterflies. The species is adapted to wetland environments but faces threats from habitat loss due to land development, water diversion, and competition from invasive species. Conservation efforts focus on protecting and restoring its moist, disturbed habitats to ensure its survival.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.16 Bolander's catchfly (Silene bolanderi)

Bolander's catchfly (*Silene bolanderi*) has a CRPR of 1B.2. This perennial herb is typically found in coastal prairies, meadows, and open, rocky hillsides at low to mid-elevations, often in areas with

well-drained, serpentine soils. It produces striking pink to magenta flowers with long, narrow petals that bloom from May to June. The species is known for its sticky, glandular hairs that can trap small insects, a characteristic typical of the *Silene* genus. Bolander's catchfly is threatened by habitat loss due to development, grazing, and competition from invasive plants. Conservation efforts are focused on preserving its coastal and serpentine habitats to maintain its populations.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.17 Beaked tracyina (Tracyina rostrata)

Beaked tracyina (*Tracyina rostrata*) has a CRPR of 1B.2. This perennial herb is endemic to California, where it grows in dry, grassy slopes, predominantly within coastal prairie communities. It produces small, inconspicuous flowers and is characterized by its elongated seedpods, which give it its "beaked" appearance. This species blooms in the spring from May to June. Beaked tracyina is threatened by habitat loss due to urbanization and agriculture.

Potential Project Impacts

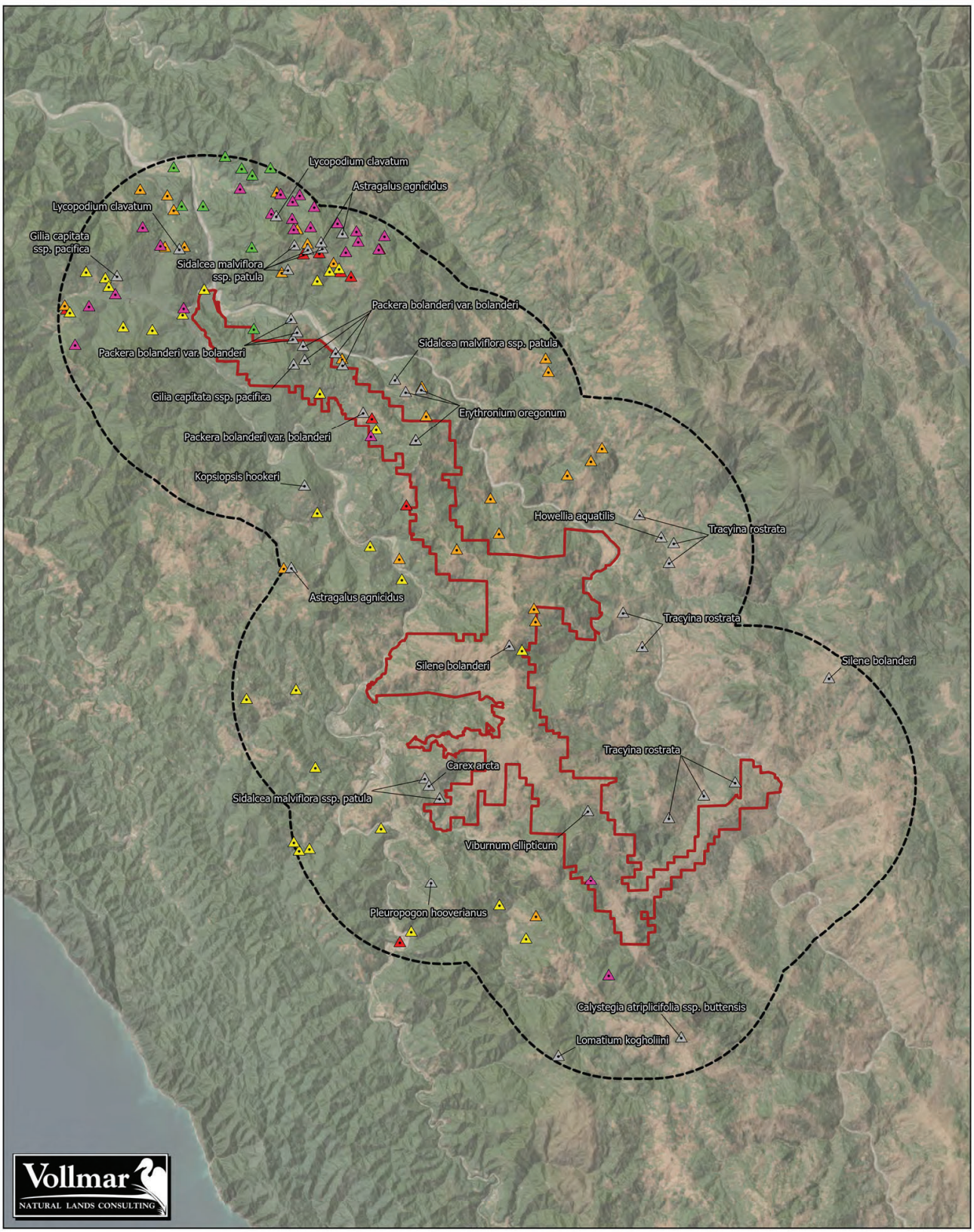
Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

7.5.18 Oval-leaved viburnum (Viburnum ellipticum)

Oval-leaved viburnum (*Viburnum ellipticum*) has a CRPR of 2B.3. This deciduous shrub is typically found in shaded, moist habitats such as riparian zones, coniferous forests, and mountain slopes. It grows in areas with well-drained, slightly acidic soils, often near streams or in canyons. The species produces clusters of white to cream-colored flowers in spring, which are followed by red to black berries in late summer. The oval-shaped leaves are dark green and turn red or purple in the fall. Major threats to this species include habitat destruction from development and invasive plant competition. Conservation efforts focus on protecting riparian ecosystems and maintaining the health of forested habitats where it thrives.

Potential Project Impacts

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse effects on this species. The inclusion of SPRs BIO-1, BIO-2, BIO-7, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, and MM BIO-1b would bring impacts to special-status plant species to a less than significant level. This impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.



Vollmar NATURAL LANDS CONSULTING

Legend

CNDDB Special-status Plants

- Erythronium revolutum
- Montia howellii
- Piperia candida
- Sidalcea malachroides
- Usnea longissima
- Other Special-status Plant

Project Study Area

- Project Study Area
- Project Study Area 5 mile buffer

FIGURE 5
Special-status Plant Map

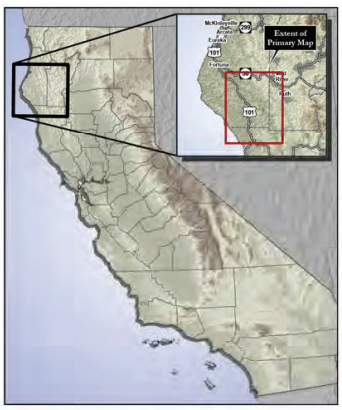
Mail Ridge Forest Health and Wildfire Resilience Project
Humboldt County, California

N
W E
S

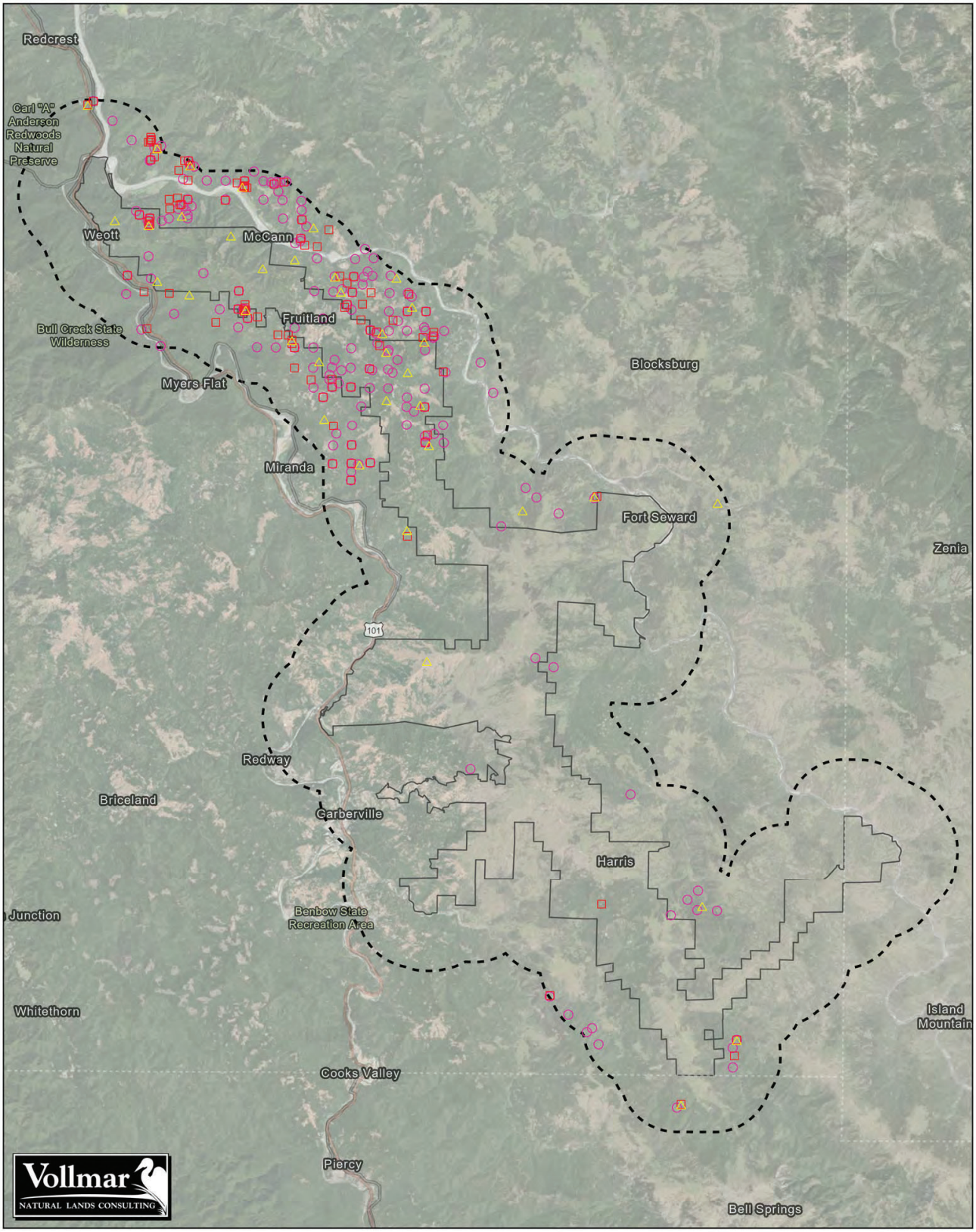
1:221,760

0 3 6 12 Kilometers

0 1.75 3.5 7 Miles



Data Sources: CNDDB, Nov. 2024 | CalVeg, 2024 | Esri World Imagery & Hillshade, 2025
Cartography by S. Wrigley 05/13/2025
Map File: 629_MailRidge_AllMapsProject.aprx



Legend

Northern Spotted Owl

- NSO Activity Center
- NSO Pair
- NSO Positive Observation

Project Boundary

- Study Area
- Study Area 1.5 Mile Buffer

FIGURE 6
Northern Spotted Owl Map

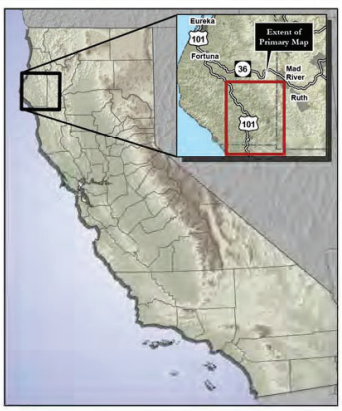
Mail Ridge
Humboldt County, California

N
W E
S

1:158,400

0 5 10 Kilometers

0 2.5 5 Miles



Data Sources: CDFW, Nov. 2024 | Esri World Imagery, 2025
Cartography by S. Wrigley 05/23/2025
Map File: 629_MailRidge_AllMapsProject.mxd

8.0 Standard Project Requirements and Mitigation Measures

8.1 Standard Project Requirements (SPRs) for Biological Resources and Hydrology

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.

SPR BIO-2: Require Biological Resource Training for Workers. All personnel involved in project activities will undergo mandatory training on environmental protection measures, species identification, and regulatory compliance. The training will focus on avoiding disturbance to sensitive habitats, recognizing special-status species, and implementing mitigation measures. Workers will also be informed of reporting procedures if wildlife is encountered during operations.

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats. Prior to any treatment, a qualified biologist will identify and map sensitive natural communities within the project area. These habitats will be marked as avoidance zones, and project activities will be adjusted to ensure they are not degraded. When avoidance is not feasible, compensatory mitigation measures, such as habitat restoration or enhancement, will be implemented to offset impacts.

SPR BIO-4: Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function. To maintain riparian habitat function, at least 75% of the overstory and 50% of the understory vegetation within riparian zones will be retained. This measure ensures that the ecological integrity of riparian corridors is preserved, providing critical shade, bank stabilization, and wildlife habitat. Any necessary vegetation removal will be conducted in a way that minimizes erosion and disturbance.

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 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).

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, a qualified botanist will conduct surveys during the appropriate blooming periods to identify special-status plant species within the project area. If such species are found, avoidance measures, such as buffer zones or modified treatment approaches, will be implemented. If avoidance is not feasible, seed collection, transplantation, or habitat restoration may be required as mitigation.

SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife. To prevent the spread of invasive species, crews will clean and inspect all equipment, vehicles, and clothing before entering or leaving infested areas. Equipment will be staged in non-infested zones when possible. Identified infestations will be treated using methods like herbicide and manual removal, with plant material being disposed of to prevent regrowth. All activities will follow Cal-IPC best management practices and apply to both initial treatments and ongoing maintenance.

SPR BIO-10: Wildlife Surveys for Special-Status Species. 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 biologist to conduct focused or protocol-level surveys for special-status wildlife species or nursery sites. If special-species wildlife species or nurseries are detected, mitigation measures such as work restrictions, habitat buffers, or seasonal timing adjustments will be implemented to minimize disturbance.

Per project pre-consultation with CA Department of Fish and Wildlife, the following additional details are provided for how to implement SPR BIO-10 for Northern Spotted Owl (NSO): No more than 14 days prior to project activities (all treatment activity types) conducted during the NSO nesting season that are within 1,300 feet of an NSO AC and/or within 1,300 feet of NSO nesting roosting habitat on state park property, where NSO surveys have not occurred or survey information is not available, one nighttime survey that includes broadcasting calls followed by a daytime stand search shall be conducted. CDFW will be contacted prior to any project activities within the 1,300 ft protection area.

A qualified biologist will monitor activities to ensure compliance with wildlife protection measures.

SPR BIO-12: Protect Common Nesting Birds, Including Raptors. To protect nesting birds, including raptors, treatment activities will be scheduled outside the active nesting season if feasible. A qualified biologist or RPF will conduct pre-treatment surveys (typically within 3 weeks of work) to identify active nests. If nests are found, feasible avoidance measures will be implemented, such as establishing buffers, modifying or deferring treatment, or monitoring raptor nests during work. Nest trees will be retained, and all actions will follow seasonal windows and project objectives. This applies to all treatment and maintenance activities.

SPR HYD-1: Comply with Water Quality Regulations. All project activities will comply with state and federal water quality regulations to prevent the discharge of waste materials into water bodies. Erosion control measures such as silt fencing, straw wattles, and sediment basins will be installed to reduce sediment runoff. Work near watercourses will be scheduled during dry periods to minimize the risk of contamination.

SPR HYD-2: Avoid Construction of New Roads. To minimize habitat disturbance and erosion, no new roads will be constructed as part of the project. Existing roads and access routes will be used to the greatest extent possible. If temporary access routes are required, they will be decommissioned and restored to pre-project conditions upon completion of the work.

SPR HYD-4: Watercourse and Lake Protection Zones (WLPZs). Watercourse and Lake Protection Zones (WLPZs) will be established along all streams and water bodies within the

project area. Buffer widths will vary based on stream classification and slope conditions, with larger buffers applied to higher-sensitivity habitats. Vegetation removal within these zones will be minimized, and ground disturbance will be avoided to maintain water quality and habitat integrity.

SPR HYD-5: Protect Non-Target Vegetation and Special-status Species from Herbicides. To prevent contamination of water bodies and non-target vegetation, herbicide application will follow strict guidelines, including the establishment of no-spray buffer zones around aquatic habitats. Herbicides will be applied manually using backpack sprayers to reduce drift, and only approved formulations with minimal environmental impact will be used. Herbicide application will be avoided during wet or windy conditions.

8.2 Standard Project Requirements (SPRs) for Geology, Soils, and Mineral Resources

SPR GEO-1: Suspend Disturbance During Heavy Precipitation. To prevent soil erosion and sediment transport, all mechanical, prescribed herbivory, and herbicide treatments will be suspended if the National Weather Service predicts a 30% or higher chance of rain within 24 hours. Activities will only resume once precipitation ceases and soils are no longer saturated. Saturation will be determined based on factors such as ponding water, loss of soil stability, or excessive wheel ruts. This measure reduces the risk of erosion and helps maintain soil integrity.

SPR GEO-2: Limit High Ground Pressure Vehicles. To prevent soil compaction and degradation, the use of heavy equipment will be restricted in wet and saturated conditions. If heavy equipment is required in such areas, mitigation measures like operating on organic debris, using low-pressure vehicles, or waiting for frozen ground conditions will be implemented. Existing compacted road surfaces are exempt from this requirement, as they are already impacted by use.

SPR GEO-3: Stabilize Disturbed Soil Areas. Soil disturbed by mechanical treatments, prescribed herbivory, or prescribed burns will be stabilized immediately following treatment activities. Areas with more than 50% bare soil exposure will be covered with mulch or organic debris to prevent erosion. In high or moderate erosion hazard areas, at least 75% of disturbed soil surfaces will be treated with mulch, while low-risk areas will require 50% coverage.

SPR GEO-4: Erosion Monitoring. Prior to the rainy season, all treatment areas will be inspected to ensure proper erosion control measures are in place. If deficiencies are found, they will be corrected before the first major storm. Post-treatment monitoring will occur after any storm event with 1.5 inches of rainfall in 24 hours, and any erosion that poses a significant sediment discharge risk will be addressed within 48 hours.

SPR GEO-5: Drain Stormwater via Water Breaks. To prevent stormwater from causing soil erosion, compacted and bare areas created during treatments will be drained using water breaks, following California Forest Practice Rules. If water breaks are ineffective, alternative erosion control measures will be implemented to maintain soil productivity and minimize sediment runoff.

SPR GEO-6: Minimize Burn Pile Size. Burn piles will be limited to a maximum of 20 feet in length, width, and diameter, except when placed on landings, road surfaces, or contoured slopes to minimize soil damage. Burn piles will not occupy more than 15% of the total treatment area and will be prohibited within Watercourse and Lake Protection Zones, as defined under HYD-4.

SPR GEO-7: Minimize Erosion. Heavy equipment use will be prohibited on slopes greater than 65%, and restricted on slopes over 50% where erosion hazard ratings are high. In moderate-risk areas (50%-65% slopes), heavy equipment will be limited to pre-existing roads or new flagged routes approved by the project proponent. Prescribed herbivory treatments will not be allowed in areas with slopes exceeding 50% to minimize erosion risks.

SPR GEO-8: Steep Slope Evaluations. A Registered Professional Forester or licensed geologist will evaluate treatment areas with slopes over 50% for landslide potential and unstable soils. If unstable areas cannot be avoided, additional mitigation measures will be implemented to ensure significant erosion or soil loss does not occur. This requirement applies to mechanical treatments, fuel reduction projects, and ecological restoration treatments.

SPR AD-2: Delineation of Protected Resources. Before any treatment activities begin, protected resources within the project area must be clearly marked using maps, flagging, or natural landscape markers such as roads. These resources include environmentally sensitive areas that require avoidance to maintain ecological integrity. A Registered Professional Forester or qualified biologist will oversee the delineation process to ensure compliance. This measure applies to all treatment activities, including maintenance.

8.3 Mitigation Measures

Mitigation Measure BIO-1a: Avoid Loss of Special-Status Plants Listed Under ESA or CESA. BIO-1a focuses on protecting special-status plant species listed under the Endangered Species Act (ESA) or California Endangered Species Act (CESA). If listed plants are identified within the project area, a no-disturbance buffer (typically 50 feet) will be established around them. The buffer size may be adjusted based on a qualified botanist's assessment of the plant's vulnerability, growth stage, and environmental conditions. Treatments within the buffer will be allowed only if they benefit the listed species, such as removing competing invasive plants. Fire ignition and herbicide application will not occur within the buffer. If avoidance is not possible, further mitigation, such as transplantation or habitat enhancement, will be required.

Mitigation Measure BIO-1b: Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA. BIO-1b applies to non-listed special-status plants, meaning species that are not officially recognized under ESA or CESA but still require conservation. Similar to BIO-1a, the project will establish a no-disturbance buffer (typically 50 feet) around these plants, with adjustments made based on plant life stage, vulnerability, and site conditions. However, certain treatment activities may be allowed within this buffer if the plant species can regenerate after disturbance (e.g., geophytes, stump-sprouting species, or annuals). Treatments must maintain the habitat function of the species, meaning that if fuel reduction efforts risk degrading the habitat (e.g., excessive canopy removal), modifications will be made to the treatment plan.

Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants. If avoidance is not feasible, a Compensatory Mitigation Plan will be prepared, prioritizing the preservation of existing populations or creating new populations through seed collection or transplantation. The plan will detail habitat restoration efforts, legal protections, and monitoring requirements.

Mitigation Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species. This measure mandates that adverse effects on listed or fully protected wildlife species be avoided. Project activities will be conducted outside of sensitive life-cycle periods, and habitat functions will be maintained by modifying treatments to avoid critical nesting, breeding, or roosting areas.

Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species. Establishes 100-foot buffers around special-status wildlife nests, burrows, and dens to prevent disturbance. Prescribed burns will be staggered to avoid treating entire habitat areas at once. A biologist will assess whether additional mitigation is needed if avoidance is not feasible.

Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife. If avoidance is not possible, impacts will be **compensated at a 1:1 ratio** through habitat preservation, restoration, or purchasing mitigation credits. A **Compensatory Mitigation Plan** will ensure long-term habitat function.

Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees. See Section 7.1.4 for details on this measure.

Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands. When working in sensitive natural communities, treatments will be designed to restore natural fire regimes and maintain habitat structure. Fuel breaks will not be created in critically imperiled habitats, and prescribed fire will be used where appropriate to maintain ecosystem balance.

Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands. If impacts on sensitive communities cannot be avoided, compensatory actions will include restoring degraded areas, preserving high-value habitat, or acquiring conservation easements. A detailed mitigation plan will outline restoration efforts and ensure long-term habitat viability.

Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat. If treatment activities affect riparian areas, compensatory mitigation will include habitat restoration, purchasing mitigation credits, or establishing conservation easements to offset habitat loss. The mitigation plan will include monitoring and long-term protection measures.

Mitigation Measure GHG-2: Implement Greenhouse Gas Emission Reduction Techniques During Prescribed Burns. To minimize emissions from prescribed burns, strategies such as reducing burn area, maintaining fuel moisture, and removing fuels before ignition will be employed. Emerging technologies like biochar production and gasification may be integrated to further reduce emissions.

9.0 CONCLUSION

The Mail Ridge Wildfire Resilience Project represents a carefully considered, landscape-scale approach to fuels reduction and forest health treatments across a diverse and ecologically significant Study Area. This report documents that the approximately 50,000-acre region—primarily spanning southern Humboldt County with an extension into Trinity County—hosts a mosaic of habitat types including conifer forests, oak woodlands, shrub-dominated areas, grasslands, rock outcrops, and redwood forests. Each of these habitats supports a wide array of flora and fauna, including numerous special-status wildlife and plant species that are vital to the region's biodiversity.

This biological evaluation highlights both the opportunities and challenges inherent in implementing mechanical, manual, and prescribed fire treatments. While the project aims to reduce wildfire potential and improve ecosystem connectivity, the report also identifies potential impacts to critical habitats and species—ranging from the Northern Spotted Owl and Marbled Murrelet to various salmonids and amphibians. To mitigate these impacts, the report recommends the incorporation of Standard Project Requirements and specific mitigation measures designed to bring any adverse effects to a less-than-significant level, and remain consistent with the CalVTP PEIR. These measures ensure that the Project not only enhances the resilience of the landscape but also maintains compliance with environmental protection standards and regulatory guidelines.

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APPENDIX A:

REPRESENTATIVE PHOTOGRAPHS OF THE STUDY AREA

(Recorded July 30, 2024 & January 14, 15, and 22, 2025)

Appendix A. Representative Photographs of the Study Area

Photo 1. Study Area along Dyerville Loop Rd, facing west (7/30/2024).

Photo 2. Oak woodland, facing northeast (7/30/2024).

Appendix A. Representative Photographs of the Study Area

Photo 3. Annual grasslands, facing northwest (7/30/2024).

Photo 4. Cattle in a grassland, facing northeast (1/14/2024).

Appendix A. Representative Photographs of the Study Area

Photo 5. Rock outcrop in grassland, facing east (1/14/2024).

Photo 6. Top of a rock outcropping with a small population of manzanita growing from the rocks, facing northeast (1/14/2024).

Appendix A. Representative Photographs of the Study Area

Photo 7. Northwestern salamander egg mass found in the northernmost redwood forests of the Study Area (1/22/2024).

Photo 8. Bobcat (*Lynx rufus*) at the transition of oak woodland to grassland, facing east (1/14/2024).

APPENDIX B:

SPECIAL-STATUS SPECIES TABLES

Table B-1. Special-status Wildlife Species Documented within the Vicinity of the Study Area

Species that have been documented or have potential to occur in the Study Area are highlighted gray.

Species	Status	Description of Habitat Requirements	Potential to Occur in Study Area
Amphibians			
foothill yellow-legged frog *Rana boylii pop. 1*	SSC	This species prefers partly shaded, shallow streams and riffles with a rocky substrate. It occurs in streams within woodlands, chaparral, and forest habitats. Mating and egg-laying occur exclusively in rivers and streams, not in ponds or lakes.	**Documented.** There are CNDDB occurrences of this species in the Study Area. There are multiple small streams with suitable habitat present within the Study Area.
Pacific tailed frog *Ascaphus truei*	SSC	This species inhabits rocky streams in wet forests with continual flow and cold, clear water. Streambanks with logs, gravelly seeps, and small boulders are required for egg laying. Sediment-free cobble substrate is required for tadpoles.	**Potential to Occur.** Multiple small streams with suitable habitat are present within the Study Area. The smaller order streams with closed canopies are likely to provide the best habitat for this species.
southern torrent salamander *Rhyacotriton variegatus*	SSC	This species prefers waterfalls and seepages, as well as shallow, cold, clear, well-shaded streams within old-growth forests. Usually found in contact with the water but occasionally among riparian vegetation.	**Potential to Occur.** Some small streams are present within the Study Area, with suitable riparian vegetation and old-growth forests for this species to habituate.
northern red-legged frog *Rana aurora*	SSC	This species prefers pools, streams, marshes, and ponds, usually below 3,000 feet of elevation.	**Documented.** Numerous small streams with suitable habitats, as well as CNDDB occurrences, are present within the Study Area.
Birds			
Cooper's Hawk *Accipiter cooperii*	WL	This species prefers wooded habitats, including forests, suburban areas, and riparian zones. It primarily preys on small birds and mammals, using its speed and maneuverability to chase down prey.	**Documented.** This species was observed during 2025 field surveys.

Species	Status	Description of Habitat Requirements	Potential to Occur in Study Area
Golden Eagle *Aquila chrysaetos*	WL, FP	This species prefers rolling foothills, mountain areas, sage-juniper flats, and deserts. This species nests in the largest trees within their range, usually within some proximity to open areas.	**Potential to Occur.** Large trees in the Study Area are likely to provide suitable nesting habitat for this species. The open fields surrounding the Study Area also provide foraging habitat. The nearest documented CNDDB occurrence is 4 miles from the Study Area.
Northern Spotted Owl *Strix occidentalis caurina*	FT, ST	This species prefers dense blocks of mature, multi-layered forests of mixed conifer, redwood, and Douglas-fir habitat.	**Documented.** Multiple CNDDB occurrences of Northern spotted owls have been documented within the Study Area.
Marbled Murrelet *Brachyramphus marmoratus*	FT, SE	This species nests in old-growth conifer forests near the ocean. It forages near shorelines but also far offshore.	**Potential to Occur.** The Study Area does encompass old-growth trees that could be used as nesting habitat and is within designated critical habitat.
Bald Eagle *Haliaeetus leucocephalus*	SE	This species prefers old-growth, lower montane coniferous forests adjacent to large bodies of water. Nests in large trees across the United States. Most nests are within 1 mile of water. Perch in tall, mature, coniferous, or deciduous trees.	**Potential to Occur.** The Study Area is situated in lower montane coniferous forests adjacent to the Eel River within the 1-mile water nesting radius. In turn providing suitable habitat for this species.
Little Willow Flycatcher *Empidonax traillii brewsteri*	SE	This species is a medium-sized migratory songbird. It breeds in coniferous and mixed woodlands with tall perches for hunting insects and winters in Central and South America's montane forests. Declines are driven by habitat loss, pesticide use, and deforestation in wintering grounds. Conservation focuses on habitat protection and sustainable forestry.	**Not Expected.** The Study Area is outside of this species' distribution in California.
Yellow-billed Cuckoo *Coccyzus americanus*	FT, SE	This species prefers to live in riparian habitats. Nest sites are selected adjacent to willow thickets, at least 3 feet from the ground, with nearby cottonwoods for foraging.	**Not Expected.** The Study Area is outside of this species' distribution in California.

Species	Status	Description of Habitat Requirements	Potential to Occur in Study Area
American Goshawk *Accipiter atricapillus*	SSC	This species is found in both deciduous and coniferous forests. They prefer old growth with intermediate to heavy canopy coverage.	**Not Expected.** The region mostly consists of secondary forests and lacks primary forest types to provide habitat for this species.
Vaux's Swift *Chaetura vauxi*	SSC, BCC	This species prefers mature and old-growth coniferous forests for nesting. They rely heavily on forests with plenty of hollow trees and cavities.	**Potential to Occur.** There are areas of the Study Area that have some old growth stands that could provide habitat.
Yellow-breasted Chat *Icteria virens*	SSC	This species inhabits dense, shrubby areas like riparian thickets and forest edges, relying on thick vegetation for nesting and foraging. It faces threats from habitat loss due to development and agriculture, with conservation focused on habitat protection and restoration.	**Potential to Occur.** The Study Area contains many riparian thickets with very dense vegetation.
Yellow Warbler *Setophaga petechia*	SSC	This species prefers moist habitats. They are found in areas with scattered trees and dense shrubbery. Often found in willows, alders, and cottonwoods.	**Potential to Occur.** There are many areas in the Study Area that provide suitable habitat for this species.
Olive-sided Flycatcher *Contopus cooperi*	SSC, BCC	This species primarily inhabits mixed conifer forests, favoring nesting areas with openings or forest edges. It is rarely found in dense, closed-canopy forests.	**Potential to Occur.** The Study Area consists of mostly mixed conifer forests.
Fish			
Chinook Salmon – California Coastal ESU *Oncorhynchus tshawytscha* pop. 17	FT, SSC	This species migrates between ocean and freshwater environments. It hatches and rears in freshwater habitats, migrates to the ocean for maturation, and then returns to its natal freshwater streams for spawning.	**Potential to Occur.** The Eel River is designated as critical habitat for this species, although it is not expected to be found in the Study Area.
Coho Salmon – Southern Oregon/Northern California ESU *Oncorhynchus kisutch* pop. 2	FT, ST	This species migrates between ocean and freshwater environments. It hatches and rears in freshwater habitats, migrates to the ocean for maturation, and then returns to its natal freshwater streams for spawning.	**Potential to Occur.** The Eel River is designated as critical habitat for this species, although it is not expected to be found in the Study Area.

Species	Status	Description of Habitat Requirements	Potential to Occur in Study Area
Pacific Lamprey *Entosphenus tridentatus*	SSC	This species spends 1 to 3 years maturing in the ocean before migrating to freshwater streams with gravel bottoms to spawn.	**Potential to Occur.** The Eel River is designated as critical habitat for this species, although it is not expected to be found in the Study Area.
Steelhead – Northern California DPS summer-run *Oncorhynchus mykiss irideus* pop. 48	FT, SE	This species migrates between ocean and freshwater environments, hatching and developing in freshwater, maturing in the ocean, and eventually returning to its natal freshwater streams to spawn.	**Documented.** There is a CNDDB occurrence of this species in the Eel River. The Eel River is designated as critical habitat for this species, although it is not expected to be found in the Study Area.
Steelhead -Northern California DPS winter-run *Oncorhynchus mykiss irideus* pop. 49	FT, SSC	This species migrates between ocean and freshwater environments, hatching and developing in freshwater, maturing in the ocean, and eventually returning to its natal freshwater streams to spawn.	**Potential to Occur.** The Eel River is designated as critical habitat for this species, although it is not expected to be found in the Study Area.
Green Sturgeon Northern DPS *Acipenser medirostris* pop. 2	SSC	This species migrates between ocean and freshwater environments, hatching and developing in freshwater, maturing in the ocean, and eventually returning to its natal freshwater streams to spawn.	**Not Expected.** Green Sturgeon have been documented in the Eel River, but only occupy the deep-water sections and would not occur within the Study Area.
Insects			
monarch butterfly *Danaus plexippus*	FPT	This species roosts in wind-protected tree groves with nectar and water nearby. Overwinters in tall trees in large groups during migration. Preferred trees include blue gum eucalyptus (*Eucalyptus globulus),* Monterey pine *(Pinus radiata),* and Monterey cypress *(Cupressus macrocarpa*). Forages on showy nectar source flowers. Breeds on milkweed *(Asclepias sp.)* plants.	**Not Expected.** No suitable habitat is present within or around the Study Area.

Species	Status	Description of Habitat Requirements	Potential to Occur in Study Area
western bumble bee *Bombus occidentalis*	SCE	This species nests in underground cavities or abandoned animal burrows and thrives in meadows and grasslands rich in flowering plants, where it forages and overwinters.	**Documented.** There is a CNDDB occurrence within the community of Fort Seward. The Study Area provides suitable habitat in the form of meadows and grasslands.
Mammals			
American badger *Taxidea taxus*	SSC	This species prefers open areas and may also frequent brushlands with little ground cover. When inactive, it occupies an underground burrow.	**Potential to Occur.** Open habitats, including meadows and grasslands, are present within the Study Area.
fisher *Pekania pennanti*	SSC	This species favors dense coniferous forests and relies on abandoned animal dens, such as those of squirrels and foxes, for resting, sleeping, and raising their young.	**Documented.** There is a CNDDB occurrence of this species within the Study Area. The Study Area provides suitable habitat for this species in the form of dense coniferous forests.
Townsend's big-eared bat *Corynorhinus townsendii*	SSC	This species is a medium-sized bat with large ears, roosting in caves, mines, and old buildings in arid and semi-arid regions of western North America. Sensitive to disturbance, it faces threats from habitat loss and human activity, with conservation efforts focused on protecting the roost and minimizing disturbances.	**Potential to Occur.** Suitable habitats in the form of large rock outcrops and crevices are present in the Study Area.
pallid bat *Antrozous pallidus*	SSC	This species is found in mountainous areas, intermontane basins, lowland desert scrub, arid deserts, and grasslands, often near rocky outcrops and water; in some areas, this species also inhabits open coniferous forests and woodland. Prefers open dry lands with rocky areas for roosting. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, hollow trees, and various human structures such as bridges, barns, porches, bat boxes, and buildings.	**Documented.** This species has been documented within the Study Area. Suitable habitats in the form of large rock outcrops and grasslands are present in the Study Area.

Species	Status	Description of Habitat Requirements	Potential to Occur in Study Area
fringed myotis *Myotis thysanodes*	LC	This species is found in habitats ranging from low desert scrub to oak woodlands. It roosts in rocky areas, including crevices and caves (with some documentation of tree snags).	**Potential to Occur.** Suitable habitat in the form of oak woodlands is present within the Study Area.
hoary bat *Lasiurus cinereus*	LC	This species is widespread in North America and California. It roosts in medium to large trees in dense woodlands and forests, usually requiring close proximity to water.	**Potential to Occur.** Suitable habitats in the form of dense woodlands and forests are present in the Study Area.
long-eared myotis *Myotis evotis*	LC	This species is widely distributed in western America and depends on wooded habitats, including juniper and conifer forests. Nurseries are located in trees.	**Potential to Occur.** Suitable habitat in the form of conifer forests is present in the Study Area.
silver-haired bat *Lasionycteris noctivagans*	LC	This species requires forested areas, especially old-growth areas. They form colonies to nest exclusively in tree cavities and hollows and are somewhat dependent on high densities of dead trees within their territories.	**Potential to Occur.** Suitable habitat in the form of old-growth forests is present in the Study Area.
sonoma tree vole *Arborimus pomo*	SSC	This species is found within forests, preferring old-growth Douglas-fir or redwood. Nests are constructed in preferably tall trees composed of Douglas-fir needles. They are often situated on a whorl of limbs against the trunk or at the outer limits of the branches.	**Documented.** This species is documented to have CNDDB occurrence in the Study Area. Suitable habitat in the form of Douglas-fir forests is present within the Study Area.
northern california ringtail *Bassariscus astutus raptor*	FP	This species prefers selecting tree cavities in mature and older forests as well as in younger forests with older trees still present.	**Documented.** There is a documented occurrence in Blocksberg, within the Study Area. Suitable habitat in the form of mature forests is present in the Study Area.

Species	Status	Description of Habitat Requirements	Potential to Occur in Study Area
Humboldt marten *Martes caurina humboldtensis*	FT, SE, SSC	This species inhabits old-growth coastal forests in northern California and southern Oregon. These forests provide dense canopy cover, understory vegetation, and structural features like logs and snags for denning and foraging. Martens rely on undisturbed habitats, avoiding clear-cuts and roads, and feed on small mammals, birds, insects, and berries. Major threats include habitat loss from logging and development. Conservation efforts should prioritize preserving old-growth forests and maintaining habitat connectivity.	**Documented.** There is a documented occurrence within the Study Area. Suitable habitat in the form of old-growth forests is present in the Study Area.
western red bat *Lasiurus frantzii*	SSC	This species is strongly associated with riparian habitats, particularly mature stands of cottonwood/sycamore trees in the Central Valley and lower reaches of the large rivers that drain the Sierra Nevada.	**Potential to Occur.** This species prefers riparian habitats and could occur within the Study Area.
Reptiles			
northwestern pond turtle *Actinemys marmorata*	FPT, SSC	This species inhabits permanent and intermittent waters of rivers, creeks, small lakes, ponds, marshes, and reservoirs. Logs, rocks, cattail mats, and exposed banks are required for basking.	**Documented.** This species has a CNDDB occurrence in the Study Area, which includes some marginal aquatic and upland habitat, although it is very unlikely to occur.

Note: Bats with the status of International Union for Conservation of Nature: Least Concern (LC) are not included in **Section 7.0** of this report but are to be mitigated for.

Status definitions:
FT – Federal Threatened;
FE – Federal Endangered;
FPT – Federally Proposed Threatened;
ST – State Threatened;
SE – State Endangered;
SCE – State Candidate Endangered;
USFWS: BCC – USFWS Bird of Conservation Concern;
SSC – CDFW Species Special Concern;
FP – CDFW Fully Protected;
WL – CDFW Watch List;
LC – International Union for Conservation of Nature: Least Concern.

TABLE B-2. Special-status Plant Taxa Documented within the Vicinity of the Study Area

Species that have been documented in the Study Area are highlighted gray.

Scientific Name **Common Name (Family Name)**	**Status, Federal/State/ CRPR[1]**	**Preferred Habitat; Elevation Range; Bloom Period**	**Potential to Occur within the Study Area**
Allium hoffmanii Beegum onion (Alliaceae)	--/--/4.3	Lower montane coniferous forest (serpentinite); Microhabitat: none; 3,610-5,905 feet; June-July	Moderate
Anisocarpus scabridus scabrid alpine tarplant (Asteraceae)	--/--/1B.3	Upper montane coniferous forest (metamorphic, rocky); Microhabitat: none; 5,415-7,545 feet; July-August (September)	Moderate
Arctostaphylos hispidula Howell's manzanita (Ericaceae)	--/--/4.2	Chaparral (sandstone, serpentinite); Microhabitat: none; 395-4,100 feet; March-April	High
Arnica spathulata Klamath arnica (Asteraceae)	--/--/4.3	Lower montane coniferous forest (serpentinite); Microhabitat: none; 2,100-5,905 feet; May-August	High
Astragalus agnicidus Humboldt County milk-vetch (Fabaceae)	--/SE/1B.1	Broadleafed upland forest, North Coast coniferous forest; Microhabitat: Disturbed areas, Openings, Roadsides (sometimes); 395-2,625 feet; (March) April-September	High
Astragalus rattanii var. *rattanii* Rattan's milk-vetch (Fabaceae)	--/--/4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest; Microhabitat: Gravelly, Streambanks; 100-2,705 feet; April-July	High
Carex arcta northern clustered sedge (Cyperaceae)	--/--/2B.2	Bogs and fens, North Coast coniferous forest (mesic); Microhabitat: none; 195-4,595 feet; June-September	Moderate
Carex praticola northern meadow sedge (Cyperaceae)	--/--/2B.2	Meadows and seeps (mesic); Microhabitat: none; 0-10,500 feet; May-July	Moderate

Scientific Name **Common Name (Family Name)**	**Status, Federal/State/ CRPR[1]**	**Preferred Habitat; Elevation Range; Bloom Period**	**Potential to Occur within the Study Area**
Carex scabriuscula Siskiyou sedge (Cyperaceae)	--/--/4.3	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest; Microhabitat: Mesic, Seeps (sometimes), Serpentine (sometimes); 2,330-7,695 feet; May-July	Moderate
Ceanothus gloriosus var. *exaltatus* glory brush (Rhamnaceae)	--/--/4.3	Chaparral; Microhabitat: none; 100-2,000 feet; March-June (August)	High
Claytonia serpenticola serpentine spring beauty (Montiaceae)	--/--/4.3	Subalpine coniferous forest, Upper montane coniferous forest; Microhabitat: Openings (usually), Rocky, Serpentine (usually); 3280-8,040 feet; April-June (July)	Moderate
Collomia tracyi Tracy's collomia (Polemoniaceae)	--/--/4.3	Broadleafed upland forest, Lower montane coniferous forest; Microhabitat: Rocky, Serpentine (sometimes); 985-6,890 feet; June-July	High
Coptis laciniata Oregon goldthread (Ranunculaceae)	--/--/4.2	Meadows and seeps, North Coast coniferous forest (streambanks); Microhabitat: Mesic; 0-3,280 feet; (February) March-May (September-November)	High
Epilobium septentrionale Humboldt County fuchsia (Onagraceae)	--/--/4.3	Broadleafed upland forest, North Coast coniferous forest; Microhabitat: Rocky (sometimes), Sandy (sometimes); 150-5,905 feet; July-September	High
Erigeron biolettii streamside daisy (Asteraceae)	--/--/3	Broadleafed upland forest, Cismontane woodland, North Coast coniferous forest; Microhabitat: Mesic, Rocky; 100-3,610 feet; June-October	High
Erigeron robustior robust daisy (Asteraceae)	--/--/4.3	Lower montane coniferous forest, Meadows and seeps; Microhabitat: Serpentine (sometimes); 655-2,000 feet; June-July	High
Erythronium oregonum giant fawn lily (Liliaceae)	--/--/2B.2	Cismontane woodland, Meadows and seeps; Microhabitat: Openings, Rocky, Serpentine (sometimes); 3,30-3775 feet; March-June (July)	Documented

Scientific Name **Common Name (Family Name)**	**Status, Federal/State/ CRPR[1]**	**Preferred Habitat; Elevation Range; Bloom Period**	**Potential to Occur within the Study Area**
Erythronium revolutum coast fawn lily (Liliaceae)	--/--/2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest; Microhabitat: Mesic, Streambanks; 0-5,250 feet; March-July (August)	Documented
Fritillaria glauca Siskiyou fritillaria (Liliaceae)	--/--/4.2	Alpine boulder and rock field, Subalpine coniferous forest, Upper montane coniferous forest; Microhabitat: Serpentine, Slopes, Talus; 5,695-8,005 feet; (April-May) June-July	Not Expected
Fritillaria purdyi Purdy's fritillary (Liliaceae)	--/--/4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest; Microhabitat: Serpentine (usually); 575-7,400 feet; March-June	High
Gilia capitata ssp. *pacifica* Pacific gilia (Polemoniaceae)	--/--/1B.2	Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland; Microhabitat: none; 15-5,465 feet; April-August	Documented
Hemizonia congesta ssp. *tracyi* Tracy's tarplant (Asteraceae)	--/--/4.3	Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest; Microhabitat: Openings, Serpentine (sometimes); 395-3,935 feet; (March-April) May-October	High
Howellia aquatilis water howellia (Campanulaceae)	FD/--/2B.2	Marshes and swamps (freshwater); Microhabitat: none; 3,560-4,230 feet; June	Not Expected
Kopsiopsis hookeri small groundcone (Orobanchaceae)	--/--/2B.3	Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest; Microhabitat: none; 295-2,905 feet; April-August	Moderate
Lathyrus glandulosus sticky pea (Fabaceae)	--/--/4.3	Cismontane woodland; Microhabitat: none; 985-2,625 feet; April-June	High
Leptosiphon aureus bristly leptosiphon (Polemoniaceae)	--/--/4.2	Chaparral, Cismontane woodland, Coastal prairie, Valley and foothill grassland; Microhabitat: none; 180-4,920 feet; April-July	High

Scientific Name **Common Name (Family Name)**	**Status, Federal/State/ CRPR[1]**	**Preferred Habitat; Elevation Range; Bloom Period**	**Potential to Occur within the Study Area**
Leptosiphon latisectus broad-lobed leptosiphon (Polemoniaceae)	--/--/4.3	Broadleafed upland forest, Cismontane woodland; Microhabitat: none; 560-4,920 feet; April-June	High
Lilium rubescens redwood lily (Liliaceae)	--/--/4.2	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest; Microhabitat: Roadsides (sometimes), Serpentine (sometimes); 100-6,265 feet; (March) April-August (September)	High
Lilium washingtonianum ssp. *purpurascens* purple-flowered Washington lily (Liliaceae)	--/--/4.3	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; Microhabitat: Serpentine (often); 230-9,025 feet; June-August	High
Listera cordata heart-leaved twayblade (Orchidaceae)	--/--/4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest; Microhabitat: none; 15-4,495 feet; February-July	High
Lupinus constancei Lassics lupine (Fabaceae)	FE/SE/1B.1	Lower montane coniferous forest (serpentinite); Microhabitat: none; 4,920-6,560 feet; July	Not Expected
Lycopodium clavatum running-pine (Lycopodiaceae)	--/--/4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic); Microhabitat: Edges (often), Openings, Roadsides; 150-4,020 feet; June-August (September)	Moderate
Lycopus uniflorus northern bugleweed (Lamiaceae)	--/--/4.3	Bogs and fens, Marshes and swamps; Microhabitat: none; 15-6,560 feet; July-September	Moderate
Mitellastra caulescens leafy-stemmed mitrewort (Saxifragaceae)	--/--/4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest; Microhabitat: Mesic, Roadsides (sometimes); 15-5,580 feet; (March) April-October	High

Scientific Name **Common Name (Family Name)**	**Status, Federal/State/ CRPR[1]**	**Preferred Habitat; Elevation Range; Bloom Period**	**Potential to Occur within the Study Area**
Montia howellii Howell's montia (Montiaceae)	--/--/2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools; Microhabitat: Roadsides (sometimes), Vernally Mesic; 0-2,740 feet; (February) March-May	Documented
Navarretia leucocephala ssp. *bakeri* Baker's navarretia (Polemoniaceae)	--/--/1B.1	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools; Microhabitat: Mesic; 15-5,710 feet; April-July	Moderate
Packera bolanderi var. *bolanderi* seacoast ragwort (Asteraceae)	--/--/2B.2	Coastal scrub, North Coast coniferous forest; Microhabitat: Roadsides (sometimes); 100-2,135 feet; (January-April) May-July (August)	Documented
Piperia candida white-flowered rein orchid (Orchidaceae)	--/--/1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest; Microhabitat: Serpentine (sometimes); 100-4,300 feet; (March-April) May-September	Documented
Pityopus californicus California pinefoot (Ericaceae)	--/--/4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest; Microhabitat: Mesic; 50-7,300 feet; (March-April) May-August	High
Pleuropogon hooverianus North Coast semaphore grass (Poaceae)	--/ST/1B.1	Broadleafed upland forest, Meadows and seeps, North Coast coniferous forest; Microhabitat: Mesic, Openings; 35-2,200 feet; April-June	Moderate
Ptilidium californicum Pacific fuzzwort (Ptilidiaceae)	--/--/4.3	Lower montane coniferous forest, Upper montane coniferous forest; Microhabitat: Usually epiphytic on trees, fallen and decaying logs, and stumps; rarely on humus over boulders; 3,740-5,905 feet; May-August	High
Ribes roezlii var. *amictum* hoary gooseberry (Grossulariaceae)	--/--/4.3	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest; Microhabitat: none; 395-7,545 feet; March-April	High
Sabulina decumbens Lassics sandwort (Caryophyllaceae)	--/--/1B.2	Lower montane coniferous forest, Upper montane coniferous forest; Microhabitat: Serpentine; 4,920-5,495 feet; July	Not Expected

Scientific Name **Common Name (Family Name)**	**Status, Federal/State/ CRPR[1]**	**Preferred Habitat; Elevation Range; Bloom Period**	**Potential to Occur within the Study Area**
Sanicula tracyi Tracy's sanicle (Apiaceae)	--/--/4.2	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest; Microhabitat: Openings; 330-5,200 feet; April-July	High
Sedum flavidum pale yellow stonecrop (Crassulaceae)	--/--/4.3	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, Upper montane coniferous forest; Microhabitat: Openings, Rocky, Serpentine, Talus, Volcanic; 1,165-7,070 feet; May-July	High
Sedum laxum ssp. *heckneri* Heckner's stonecrop (Crassulaceae)	--/--/4.3	Lower montane coniferous forest, Upper montane coniferous forest; Microhabitat: Gabbroic (sometimes), Serpentine (sometimes); 330-6,890 feet; June-July	High
Sidalcea malachroides maple-leaved checkerbloom (Malvaceae)	--/--/4.2	Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland; Microhabitat: Disturbed areas (often); 0-2,395 feet; (March) April-August	Documented
Sidalcea malviflora ssp. *patula* Siskiyou checkerbloom (Malvaceae)	--/--/1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest; Microhabitat: often roadcuts, Roadsides (often); 50-4,035 feet; (March-April) May-August	High
Silene bolanderi Bolander's catchfly (Caryophyllaceae)	--/--/1B.2	Chaparral (edges), Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest; Microhabitat: Usually grassy openings, sometimes dry rocky slopes, canyons, or roadsides, Openings (usually), Roadsides (sometimes), Rocky (sometimes), Serpentine (sometimes); 1,380-3,775 feet; May-June	Documented
Tiarella trifoliata var. *trifoliata* trifoliate laceflower (Saxifragaceae)	--/--/3.2	Lower montane coniferous forest, North Coast coniferous forest; Microhabitat: moist shady banks, Edges, Streambanks; 560-4,920 feet; (May) June-August	High
Tracyina rostrata beaked tracyina (Asteraceae)	--/--/1B.2	Chaparral, Cismontane woodland, Valley and foothill grassland; Microhabitat: none; 295-4,165 feet; May-June	Documented

Scientific Name **Common Name (Family Name)**	**Status, Federal/State/ CRPR[1]**	**Preferred Habitat; Elevation Range; Bloom Period**	**Potential to Occur within the Study Area**
Usnea longissima Methuselah's beard lichen (Parmeliaceae)	--/--/4.2	Broadleafed upland forest, North Coast coniferous forest; Microhabitat: On tree branches; usually on old growth hardwoods and conifers; 165-4,790 feet; no bloom period listed	Documented
Viburnum ellipticum oval-leaved viburnum (Viburnaceae)	--/--/2B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest; Microhabitat: none; 705-4,595 feet; May-June	Documented

Compiled from a CNPS search of the Miranda and Fort Seward quadrangles and all surrounding quadrangles: Weott, Myers Flat, Blocksburg, Black Lassic, Alderpoint, Jewett Rock, Harris, Garberville, Briceland, and Ettersburg.

[1] **Rarity Status Codes:**
FE = Federally listed as Endangered
FT = Federally listed as Threatened
FD = Federally Delisted
SE = State listed as Endangered
ST = State listed as Threatened

CRPR Codes:
CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere; CRPR List 1B = Plants rare, threatened or endangered in CA and elsewhere; CRPR 2B = Plants rare, threatened or endangered in California but more common elsewhere; CRPR 3 = More information is needed about plant; CRPR 4 = Plants of limited distribution, a watch list
CRPR: '.1' = Seriously threatened in CA; '.2' = Fairly threatened in CA; '.3' = Not very threatened in CA