CalVTP Project-Specific Analysis and Addendum

January 2026

Vanauken Creek Fuel Break Project
Humboldt County, California

CalVTP ID 2026-02

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Internal Draft – Not for Public Review

I. INTRODUCTION

OVERVIEW OF THE PROJECT

Sanctuary Forest Inc. (SFI) in cooperation with the Humboldt County Resource Conservation District (HCRCD) and the State Coastal Conservancy (SCC) is proposing the Vanauken Creek Fuel Break Project (Project) in southern Humboldt County. HCRCD is acting as the lead agency for the Project. SCC is the primary funder of the Project. SFI is acting as the primary subcontractor to design and implement the Project. The Project will occur in the vicinity of Whitethorn, CA (**Figures 1 and 2**). The main objective of the Project is to safeguard the rural community of Whitethorn from wind-driven wildfires by establishing three shaded fuel breaks equaling approximately 171-acres that would reduce the amount and continuity of hazardous fuels, and up to an additional 426 acres that would be subject to burn preparation/fire hazard reduction, prescribed burn, and reentry. The Project, covering a total of 597 acres, would focus on Whitethorn, a high-risk wildfire area classified entirely within the "High" Fire Hazard Severity Zone. It is also located within the Wildland-Urban Interface (WUI) zone, as designated by the California Department of Forestry and Fire Protection (CAL FIRE) in its 2024 mapping (CAL FIRE 2024). The regional climate further contributes to elevated wildfire risk. The Project area experiences cool, wet winters with high annual precipitation—generally exceeding 85 inches per year—followed by warm, dry summer conditions, with average daytime temperatures reaching the 70s °F (NOAA 2025; Weather Atlas, n.d.). This seasonal pattern promotes robust vegetation growth during the wet season, followed by drying of fuels during the summer and fall fire season, increasing the potential for wildfire ignition and spread. The Project aligns with the priorities set forth in the 2019 Humboldt County Community Wildfire Protection Plan (CWPPP) and the Southern Humboldt Planning Unit Action Plan. CAL FIRE has identified the area as a Priority Landscape in its Reducing Wildfire Threats to Communities mapper.

The Project would design and implement measures that create protective buffers around homes, shielding them from wildfires that may start in timberlands, while also protecting timber resources and ecological values from fires that could originate in nearby developed areas or along roads. Additionally, the Project would prioritize areas for these initiatives, such as timberlands near developed areas east of Whitethorn, south of Briceland, and in the Sproul Creek region. As demonstrated in recent fires, including the CZU Lightning Complex in Santa Cruz County, California, fuel breaks can be critical in providing access for firefighters into less developed areas and have been vital in creating firelines[1] for low-intensity fires to help slow wildfire spread. Project implementation would not stop fire spread during periods of strong, warm, downslope winds with low relative humidity (i.e., Foehn winds) when pieces of burning material can blow across fuel breaks. However, the Project would provide points from which firefighting resources can "anchor" to conduct suppression activities, and it would increase the construction rate of firelines while simultaneously reducing the amount of air-delivered fire retardant required to coat vegetation effectively. Slowing the spread of wildfire would provide additional time for an effective community evacuation and lessen the impact on suppression resources.

Uncontrolled wildfire is associated with environmental degradation impacts such as increased greenhouse gas emissions and habitat loss. The Project would reduce the risk of catastrophic wildfire and improve forest health, and community safety by implementing a series of shaded fuel breaks and conducing larger scale forest thinning and prescribed burning. Strategic fuel removal would focus on areas of high fuel concentrations and would disrupt the horizontal and vertical continuity of fuel loads. Treatments will improve forest health and ecosystem function by reducing the number of trees per acre. This will result in a landscape that is more resilient to

[1] A fireline is a break in fuel, made by cutting, scraping, or digging. It can be done by mechanized equipment such as bulldozers, but in most parks, it is done using hand tools (NPS 2017).

wildfire. Biological diversity in the area would be improved by promoting conditions that favor native plant and animal species. Forest health would be improved through enhancing native, fire-resilient plant communities primarily through ladder fuel and weed removal, opening space for native plants to return. Healthy, mature trees and scrub dominating the canopy would be thinned out and retained, reducing new brush and understory growth while preserving the carbon sequestration function. Biomass would be reduced in open grassy areas to increase the availability of "edge habitat" for forage for wildlife.

The Project would be implemented on private timberlands surrounding the community of Whitethorn, which is a small community of approximately 1,444 residents located in Humboldt County, along the Lost Coast.

The Project treatments proposed in this Project-Specific Analysis (PSA) would reduce hazardous fuels in a deliberate manner designed to minimize environmental impacts to wildlife and protected plants consistent with the California Vegetation Treatment Program (CalVTP) Programmatic Environmental Impact Report (PEIR; Ascent Environmental 2019). For the entire state, the CalVTP PEIR identified 20.3 million acres within the 31-million-acre State Responsibility Area (SRA) that may be appropriate for vegetation treatments as part of the CalVTP. The PEIR calls this the "treatable landscape" or "treatable areas." CalVTP recognizes that the treatable landscape represents areas suitable for CalVTP vegetation treatments, but projects will not necessarily occur in every location within the treatable landscape. The location and geographic extent of projects will be determined based on several factors, including environmental constraints and treatment objectives, which are analyzed for the Project proposed within this PSA. Of the approximate 597-acre project footprint, approximately 99.32 percent (593 acres) is located within the CalVTP treatable landscape (**Figure 3**). Because approximately 0.68 percent (4 acres) of the project footprint occurs outside of the treatable landscape, this document serves as both a PSA and an Addendum to the CalVTP PEIR to provide CEQA compliance for the proposed vegetation treatments within and outside of the treatable landscape.

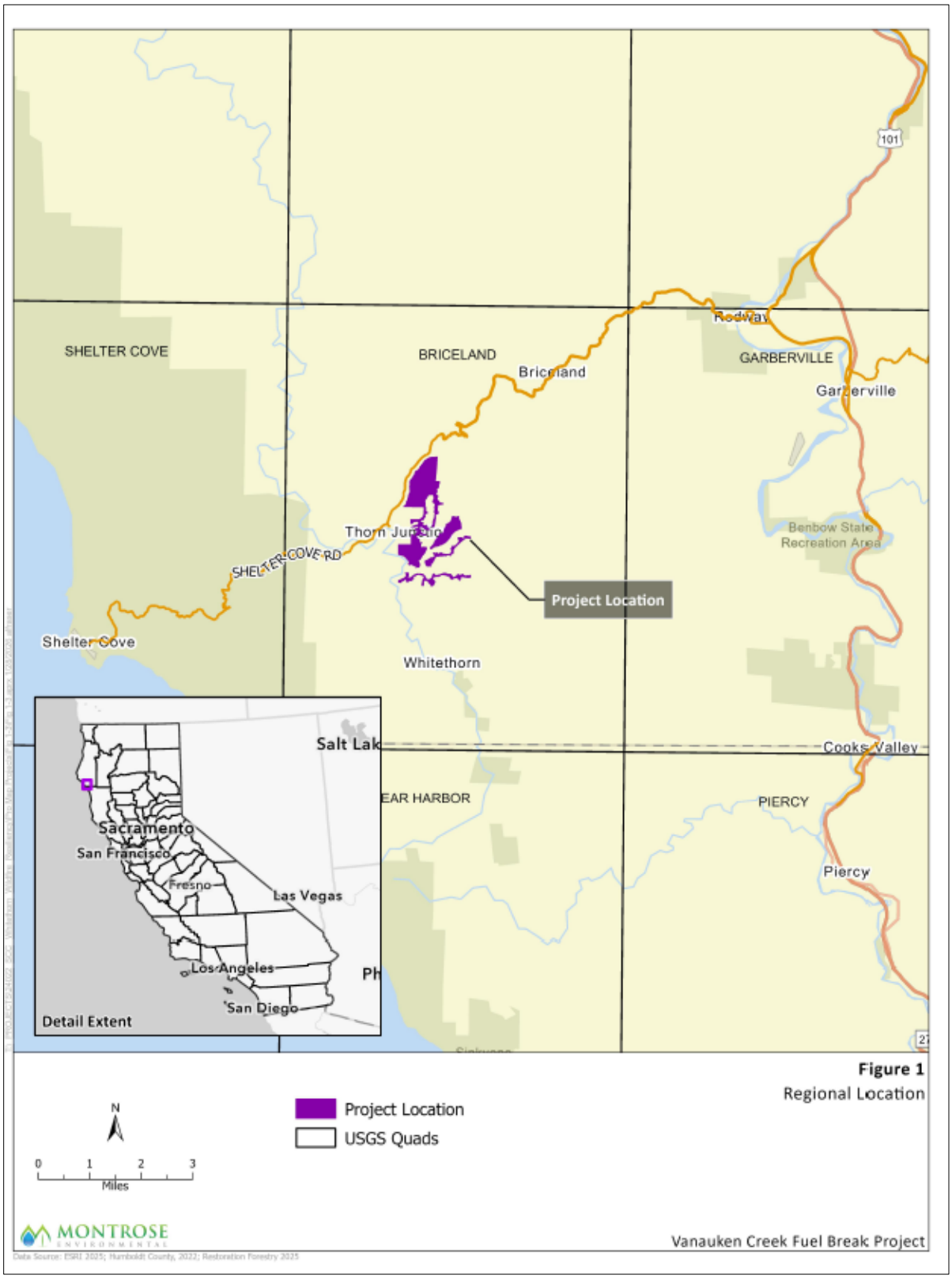

Figure 1. Regional Location

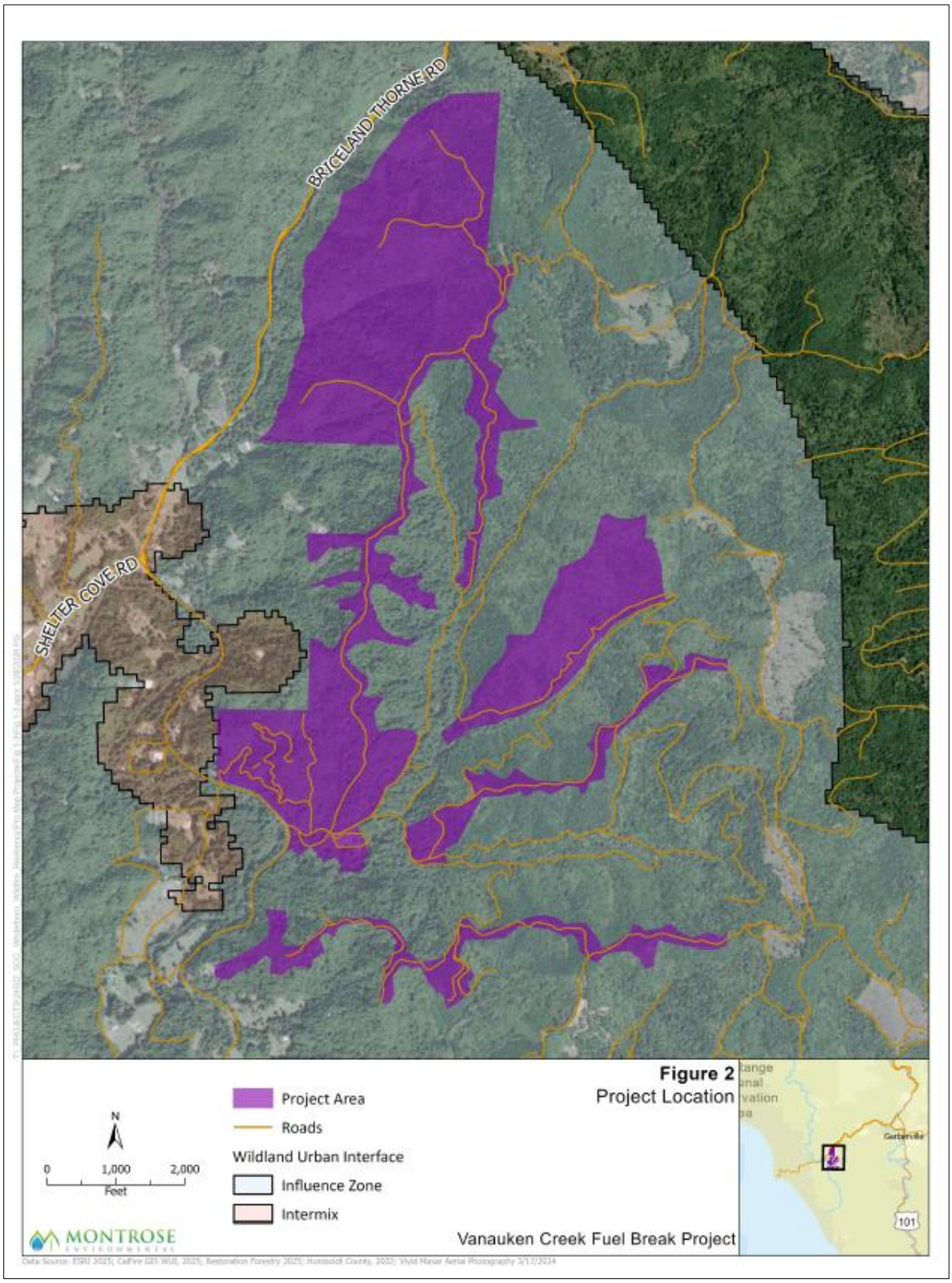

Figure 2. Project Location

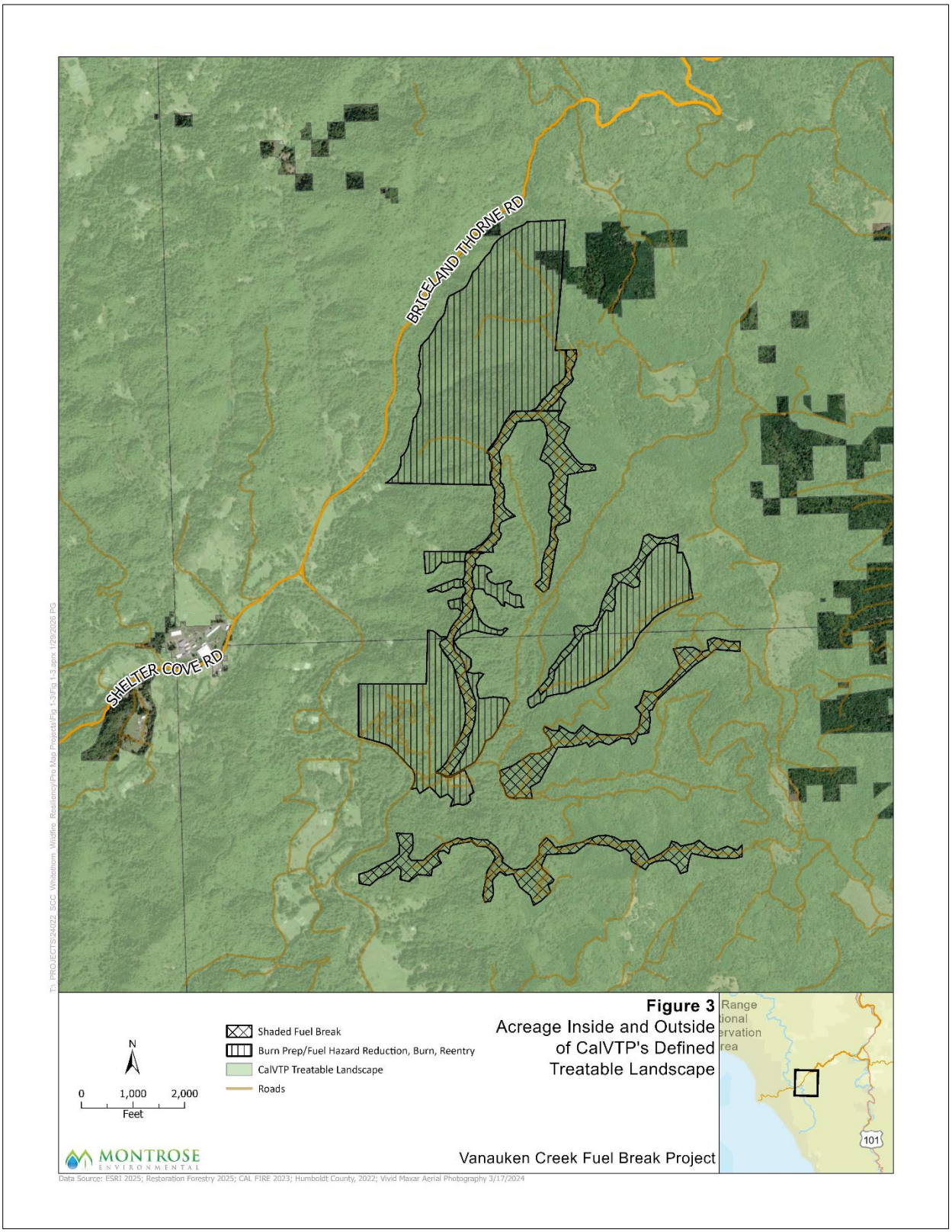

Figure 3. Acreage Inside and Outside of CalVTP's Defined Treatable Landscape

California Environmental Quality Act

The CalVTP PEIR evaluated the potential environmental effects of implementing vegetation treatments to reduce the risk of wildfire within CAL FIRE's SRA. Serving as the lead agency under CEQA, the HCRCD is proposing vegetation treatments across 597 acres of land within Humboldt County. The proposed treatment types include fuel breaks and fuel reduction, mostly within the wildland-urban interface (WUI) (Figure 2). The treatment activities and methods include mechanical, manual, pile burning, and prescribed burning. Additionally, spot use of herbicides may be done in select areas to maintain treated areas and/or reduce the threat of invasive species spread.

The HCRCD has evaluated the proposed treatments for CEQA compliance as later activities covered by the CalVTP PEIR using the PSA checklist herein. These treatment types and treatment activities are consistent with those covered in the CalVTP PEIR. Ongoing maintenance of the proposed vegetation treatment areas would involve the same activities as the original treatments (i.e., manual, mechanical, and prescribed burning treatments).

Purpose of this Project-Specific Analysis and Addendum

This document serves as the PSA to evaluate whether the Project is within the scope of the CalVTP PEIR. As described above, the treatment types and treatment activities are consistent with the CalVTP, which identifies the portion of the SRA that may be appropriate for vegetation treatments as "the treatable landscape." One criterion for determining whether a project is within the scope of the CalVTP PEIR is whether it is within the CalVTP treatable landscape (i.e., the geographic extent of analysis covered in the PEIR). Within the project area, approximately 593 acres are within, and 4.0 acres are outside of the treatable landscape (Figure 3).

The PSA checklist (see Section 4) includes the criteria to support an addendum to the CalVTP PEIR for the inclusion of proposed treatment areas outside the CalVTP treatable landscape. 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 more severe than those covered in the CalVTP PEIR and/or would result in any new impacts that were not covered in the PEIR. The project-specific mitigation monitoring and reporting program (MMRP), which includes the CalVTP standard project requirements (SPRs) and mitigation measures (MMs) applicable to the Project, is presented in Attachment A. The SPRs and MMs have been tailored to the specific impact avoidance and minimization actions relevant to the proposed treatments, agency standard practices, and conditions and resources present within each treatment site. In all cases, the additional project-specific implementation instructions and clarifying edits to MMs maintain the SPRs and MMs as equivalent or more effective than those presented in the PEIR. Where applicable, the SPRs identified in the MMRP have been incorporated into the proposed vegetation treatments as a standard part of treatment design and implementation of the Project.

This document also serves as an addendum to the CalVTP PEIR for the inclusion of the additional 4.0 acres outside of the CalVTP treatable landscape. An addendum to an EIR is appropriate when, after a previously prepared EIR has been certified, changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none of the changes or revisions would result in new or substantially more severe significant environmental impacts. In this case, there are no changed circumstances.

II. PROJECT DESCRIPTION

SFI in cooperation with the HCRCD has proposed the Project to reduce hazardous fuels on up to 597 acres located within a CAL FIRE-designated high wildfire hazard severity zone. The project footprint and surrounding area have a wildfire hazard risk that is considered "high" by CAL FIRE (CAL FIRE 2024). Multiple factors contribute to wildfire hazard risk, including widespread invasive, noxious, fire-hazardous vegetation; decades of accumulating dead vegetation; over a century of fire suppression; and the increased risk of anthropogenic ignition associated with dense urban development (CAL FIRE 2022). The Project would reduce fuel loads and maintain them at those reduced levels.

Treatment types and activities would be contingent upon existing site conditions, accessibility, and fuels management needs to achieve the fuel breaks. The Project proposes treatment types consistent with the CalVTP, and proposed activities would be consistent with CalVTP described treatment activities: manual treatment (including riparian thinning), mechanical treatment, and prescribed burning (broadcast and pile). While not currently planned, herbicide (spot treatment) is included as an optional treatment and could be used to treat tanoak (*Notholithocarpus densiflorus* var. *densiflorus*) resprouting occurrences within fuel break areas, if needed. While 99.32 percent of the project footprint includes land mapped as treatable landscape by the CalVTP, 0.68 percent is not considered to be within the CalVTP treatable landscape. Treatment types and treatment activities explained in this Project Description would be consistent throughout the project footprint regardless of whether it has been mapped as treatable landscape. Additionally, although not included in this PSA, other mechanical wildfire resilience activities may take place in the same area around the same time.

TREATMENT TYPES

The Project would use a combination of treatment types to create three linear breaks to assist firefighting resources in containing or stopping a fire. Strategic placement of the WUI fuel breaks would be based upon the prevailing vegetation types, topographic characteristics, road access, environmental considerations, and surrounding land uses. Fuel breaks give firefighters access to control wildfires and are useful in slowing fires before they grow beyond initial attack capabilities. Fuel breaks permit responders to reach the leading edges of a fire and protect isolated communities. Fuel breaks can also reduce or stop the lateral spread of wildfire. In heavily wooded areas, shaded fuel breaks would be implemented to strike a balance between retaining sufficient canopy cover and reducing canopy-to-canopy contact between trees. Maintaining canopy shade helps suppress the growth of grasses and brush that contribute to surface fire spread and reduces future maintenance needs, while selectively increasing canopy spacing limits the potential for crown fire initiation and spread. Portions of the fuel breaks would extend up to a width of 400 feet based on topography, site conditions, and land management constraints. Work would be completed with minimal disturbance to the ground and remaining vegetation. Project implementation of initial treatments is expected to start in spring 2026 and to be completed in phases on an annual basis, depending on availability of funding, crews, and extended seasonal delays or unexpected disruption. Treatment activities by fuel type are described in more detail in Section B below.

TREATMENT ACTIVITIES

Treatment activities to achieve project objectives would be applied singularly or in combination, depending on site conditions and site-specific goals of each treatment type. The Project's proposed treatment activities are consistent with CalVTP PEIR (Ascent Environmental 2019) and would include some or all of the following:

Prescribed Burning (Broadcast)

Prescribed fires would mimic periodic low intensity wildfires historically prevalent in the region and would create similar structural and habitat conditions that benefit many plant and wildlife species. Gradual reintroduction of fire presents an opportunity to improve forest health, reduce critical fuel loading, improve emergency access, and regenerate a healthy ecosystem. Prescribed low intensity surface fires (broadcast burning) would be used to control vegetation and manage fuel loads. Prescribed burning would reduce the volume of grass and thatch while removing encroaching brush and trees that are overtaking the grassland. When possible, burning would be timed to control invasive non-native grasses where present. Prescribed burning would remain within a predetermined area and would occur only with specific fuels and weather conditions. Perimeter fire lines would include existing roads and natural features where possible to maintain aesthetic values. Additional holding lines will be used as needed based on site specific conditions and the requirements of the burn boss, CAL FIRE, or other qualified person. Prescribed burns would occur after adequate burn prep has been done to ensure that the objectives of the burn can be met while keeping negative impacts to forest health to a minimum. Burn prep includes forest thinning, removal of forest fuel around the base of high value trees, and other activities needed to ensure a safe and effective burn can be done. Prescribed burns will be used for maintenance of the Fuel Break treatment and will also be done multiple times over the next 5-7 years as needed to meet the objectives of lower fire risk and improved forest health.

Active burns would follow environmental safety guidelines, including burning only under consideration of specific weather conditions (e.g., appropriate humidity, wind direction) and coordinating with resource agencies such as the California Air Resources Board (CARB) and the North Coast Unified Air Quality Management District (NCUAQMD). Specifically, active burns would include the preparation and implementation of a burn plan and a Smoke Management Plan (SMP). The HCRCD would report site conditions and request approval to burn through the Prescribed Fire Information Reporting System (PFIRS), which serves as an interface between air quality managers, land management agencies, and individuals that conduct prescribed burning in California. A prescribed burn SMP must be submitted to the NCUAQMD at least 30 days prior to burning and must be approved prior to burning.

Prescribed burns would typically be ignited using various ignition devices, including, but not limited to, drip torches, fuzees, helitorches, and vary pistols. Prescribed burns are typically completed in a single day, but under certain circumstances could be maintained for up to 1 week. On average, up to 45 workers are present on site for a prescribed burn. Broadcast burning may use bulldozers to install control lines pre-emptively and in case of an emergency. Heavy equipment would be operated from an existing road or stable operating surfaces with less than 50 percent slope. Low intensity back burns would be allowed to enter watercourse and lake protection zones (WLPZs), however, no ignition would occur within these areas (see SPR HYD-4). Additionally, all prescribed burning would be excluded from riparian habitat areas (SPR BIO-4).

Mechanical Treatment

Mechanical treatments would include mowing, masticating, chipping, and broadcasting target vegetation above ground surface, with particular care taken to minimize ground disturbance. A variety of equipment, including, but not limited to, mowers, masticators, and track chippers, would be used as appropriate. Mechanical treatment activities would occur on slopes less than 40 percent grade, along ridges, and may occur on slopes greater than 40 percent grade with equipment that can reach target vegetation from existing road infrastructure or other stable operating surfaces. No mechanical treatment would occur on slopes greater than 50 percent grade that have an erosion hazard rating of high or extreme or on mapped unstable areas. Mechanical treatments in areas greater than 50 percent grade on unstable areas and unstable soils (soil with moderate to high erosion hazard) would require evaluation by a Registered Professional Forester (RPF), licensed geologist, or other qualified person prior to treatment.

Mechanical treatments would be limited to cutting or chopping above-ground vegetation with the intent of keeping masticating heads out of duff layers and minimizing direct disturbance to subsurface soil layers, allowing

intact root systems to resprout. Mechanical activities would cut, crush/compact, or chop standing and downed vegetation using masticators and other methods. Maximum (diameter at breast height (DBH) to be removed is 12" for hardwoods and 14" for conifers. Downed woody debris, and woody shrubs would be strategically masticated to increase spacing and reduce fuel continuity. Native understory vegetation, brush, and shrubs under the drip lines of trees would be cut and masticated leaving root systems intact for resprouting. Mechanical treatments would avoid state or federally jurisdictional waters and riparian habitat by a minimum of 50-100 feet, depending on the class of the watercourse and the slope[2]. No mechanical equipment would be used with "wet tires"[3] or during the rainy season, if it would cause damage to the surrounding area. During typical mechanical treatments, there may be multiple ground crews with up to 20 workers and equipment such as bucket trucks, skid steers, tow chippers, track chippers, and masticators with swing arm attachments. Typical mechanical treatments would require several days to several months to complete, depending on the size of the treatment area, steepness of terrain, and type and density of vegetation.

Manual Treatment

Ground crews may use hand tools and hand-operated power tools, including, but not limited to, chainsaws, hand saws, pole saws, McLeods, Pulaskis, weed pullers, brush cutters, and loppers. Manual treatments would cut, clear, and/or prune trees, herbaceous vegetation, and woody shrubs to increase space between trees. Manual treatments would also be used to treat dead, dying, and diseased trees. Manual treatments may occur anywhere within the Project area but are most likely to be used on slopes greater than 40 percent grade or anywhere where mechanical treatments are infeasible. In some instances, manual treatments may be used in areas that have previously undergone mechanical treatments if additional pruning is needed. As part of proposed manual treatments, riparian thinning would also be conducted using hand crews within the 50-foot exclusion zone from state or federally jurisdictional waters and riparian habitat to reduce stems per acre and shift species composition toward more deciduous tree species, reduce the risk of wildfire, improve forest health, and increase streamflow.

Manual treatments within the Project area would require between several days to several months to complete, depending on the size of the treatment area, steepness of terrain, and type and density of vegetation. Manual crews typically treat 0.3 acre or more per day per crew. Manual treatments typically require one to two hand teams with up to 40 crew members to be present on site.

Herbicide Application

Herbicide application is not anticipated at this time. If used, however, herbicides would be applied strategically to supplement other treatment methods to prevent the regrowth of tanoaks within fuel break areas and the resprouting of invasive species within the treatment areas and along roads. Effective herbicides identified by the California Invasive Plant Council (Cal-IPC) and U.S. Department of Agriculture that are consistent with those described in the CalVTP PEIR would be applied. On-the-ground application methods would include painting cut

[2] Watercourse and Lake Protection Zone (WLPZ) widths are based on water class (I-IV) and slope percentage. WLPZ widths vary as follows:

- **Class I**: 150 feet for slopes <30%, 170 feet for slopes 30-50%, and 190 feet for slopes >50%.
- **Class II**: 100 feet for slopes <30%, 120 feet for slopes 30-50%, and 140 feet for slopes >50%.
- **Class III**: 50 feet for slopes <30%, 75 feet for slopes 30-50%, and 100 feet for slopes >50%.
- **Class IV**: Typically, no setback is required, regardless of slope.

(BOF 2019)

[3] "Wet tires" refers to mechanical equipment (such as trucks or construction vehicles) operating with tires that are wet due to recent rain, muddy conditions, or waterlogged ground.

stems or stumps and using backpack sprayers or hand applicators to target specific invasive plants; no aerial spraying, broadcast spraying, or spraying from trucks would occur. No herbicide treatment would occur within 50 feet of aquatic habitat.

Herbicide application would comply with the U.S. Environmental Protection Agency (EPA) label directions and both California Environmental Protection Agency (CalEPA) and California Department of Pesticide Regulation label standards. All herbicide application would be performed or supervised by certified and licensed pesticide applicators in accordance with all local, state, and federal regulations. Herbicide application would not take place within 24 hours before or after a rain event.

Biomass Disposal

The goal of biomass disposal is to reduce ignitable material and associated air quality impacts from wildfire, reduce brood material for harmful insects and disease, and enhance aesthetics. By reducing the available fuel in the project area, the fuel continuity is disrupted which may slow down the spread of wildfires and decrease potential fire intensity.

Methods for managing biomass include natural decomposition (e.g., chip and broadcast, lop and scatter) pile burning, and prescribed fire. Downed woody debris may be masticated where it creates a fire hazard, unless it is being used as habitat for terrestrial species. Whenever feasible, natural decomposition of biomass would be preferred because: (1) forestry mulch aids in mitigating erosion and excessive soil disturbance; (2) keeping material on site prevents the spread of disease and pathogens to other sites, with Sudden Oak Death (SOD; *Phytophthora ramorum*) being of particular concern in the project region; and (3) greenhouse gas emissions are reduced by avoiding the transportation of material off site. These measures would help prevent beetles from completing their life cycle by minimizing the time brood material remains on-site and making it less suitable for breeding, such as by covering logs with plastic, exposing them to solar radiation, or burying them (CAL FIRE 2023).

Natural Decomposition

Cut vegetation may be retained on site to decompose naturally via “chipping and broadcasting” and “lopping and scattering” across the landscape. Residual natural woody material would be spread uniformly to a depth not exceeding approximately 4 inches (average approximately 3 inches), except in areas adjacent to prescribed burn units, where material would be reduced, rearranged, or removed as needed to maintain safe burn conditions and effective control lines. Slash (i.e., fine and coarse woody debris) from cut trees or pre-existing debris would be chipped and broadcast across the landscape. Off-road trails may be mulched if compatible with landowner’s objectives. Slash greater than 4 inches in diameter would be removed from the fuel break whenever possible and pile burned, unless the area is included in a prescribed fire. Where log removal is not possible, and where equipment can access slopes less than 40 percent grade, masticators and/or chippers would be utilized to mulch target vegetation.

Lopping and scattering biomass could be used throughout the project area, but especially in areas where mastication and pile burning would not be feasible. Any slash material from cut trees or pre-existing debris would be lopped to an appropriate length based on best management practices and distributed uniformly.

Cut vegetation and chips would not be placed below the ordinary high-water mark of aquatic features, within wetlands, or within riparian areas, except where natural woody material is used in a limited and site-specific manner to stabilize banks, reduce erosion, or enhance habitat (e.g., gully stuffing). Any such activities would be implemented only where appropriate and may require additional environmental review (including CEQA compliance) and approvals from applicable state and local agencies, including the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW). Slash treatment would be implemented to reduce fuel loads and wildfire risk near roads and

habitable structures. Treatment methods would include removal, piling and burning, chipping, or lopping of slash and woody debris to maintain effective fuel breaks, reduce fuel continuity, and limit ladder fuels. Larger woody material in proximity to roads and structures would be treated or removed as needed. All slash treatment would be completed within applicable timeframes and in a manner consistent with regional forest practice and fire safety standards.

Pile Burning

If chipping or lopping and scattering the materials is not an option, hand-cut material ranging from 1 to 10 inches in diameter would be stacked in tall, narrow piles to deter terrestrial species from using them as habitat. The piles would be covered in kraft paper to ensure they remain dry for burning. Most of the piles would be built in open areas of the forest floor. Suitable areas for pile burning are open areas away from tree canopies and power lines. Sites suitable for pile burning would depend on location of sensitive species habitat and safety guidelines (e.g., humidity, wind direction.). Pile burning would be conducted in accordance with applicable burn permits, smoke management requirements, and Cal VTP Standard Project Requirements, and would be authorized by the local authority having jurisdiction through a Fuel Reduction Burn Permit or LE-5 issued by the local CAL FIRE Battalion Chief. Burns would be coordinated with appropriate resource agencies (e.g., CARB and NCUAQMD) and implemented pursuant to an approved burn plan that includes a Smoke Management Plan, with site conditions and burn authorization requested through the Prescribed Fire Information Reporting System (PFIRS). Typical pile-burning practices may include burning multiple piles in a single day, limiting pile size, avoiding placement on roads, trails, logs, stumps, or watercourses, and conducting burns under low fire-danger conditions when piles are sufficiently dry for ignition and surrounding fuels are more saturated.

TREATMENT PRESCRIPTIONS BY FUEL TYPE

Traditional fuel reduction methods rely on treatment activities that are typically determined by fuel type, categorized as grassland, shrub, and tree fuel types.

The overarching treatment approach would follow these basic guidelines:

- Watercourses would be protected by a 50-foot mechanical treatment exclusion zone year-round. Biomass disposal methods, including cut and chipped vegetation and pile burning, would avoid watercourses, except where natural woody material is used in a limited and site-specific manner to stabilize banks, reduce erosion, or enhance habitat (e.g., gully stuffing). As mentioned above, these activities would be implemented only where appropriate and may require additional environmental review and approvals from applicable state and local agencies.
- Removal of invasive plants, unhealthy trees, and dead woody material would be prioritized before removing live native vegetation.
- Hazardous trees of any size (e.g., dead or dying trees) identified by a qualified professional may be removed, unless determined valuable for wildlife (e.g., nesting birds, cavity-nesting animals).
- Equipment used for mechanical treatment would avoid operating on slopes greater than 65 percent grade, or 50 percent grade where the erosion hazard rating is high or extreme, or that lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a watercourse or lake (see SPR Geo-7).
- No cleared timber or other forest products would be removed for commercial purposes.

- All treatment activities and biomass distribution, except for manual riparian thinning, would avoid riparian habitat by a standard minimum buffer of 50 feet from the top of bank. Buffer size would increase if recommended by a qualified biologist or registered professional forester based on factors such as slope, existing erosion, sensitivity of the vegetative habitat, or presence of sensitive resources. For riparian thinning within the 50-foot exclusion zone, SPRs and MMs from the CalVTP EIR would be implemented to minimize potential impacts related to riparian habitat.

Grassland Fuel Type Prescription

Grass fuels in the project area include habitats identified primarily as annual grasslands (with some perennial grasses present) under the California Wildlife Habitat Relationships (CWHR) system. In areas dominated by non-native grasses, vegetation management would involve trimming grasses, creating horizontal separation between plants, and lowering the overall volume of combustible material. A strategic mix of techniques—such as targeted mowing, controlled burning, and selective herbicide application—could be used to manage grass- and herb-dominated zones, as well as locations where shrubs have begun to encroach.

Shrub Fuel Type Prescription

Shrub fuel types in the project area are limited but may include habitats classified by the CWHR system as coastal scrub and coyote brush (*Baccharis pilularis*) scrub.[4] These habitats are often interwoven with Douglas fir (*Pseudotsuga menziesii* var. *menziesii*) and montane hardwood communities and are characterized by dominant shrub species such as California huckleberry (*Vaccinium ovatum*), Howell's manzanita (*Arctostaphylos hispidula*), western poison oak (*Toxicodendron diversilobum*), and wood rose (*Rosa gymnocarpa*). Vegetation management in these areas is designed to strategically reduce hazardous fuels while preserving the ecological integrity and structural diversity of native scrub habitats.

Treatment would focus on the selective removal of invasive plant species—such as French broom (*Genista monspessulana*), Scotch broom (*Cytisus scoparius*), and Himalayan blackberry (*Rubus armeniacus*)— as well as dead or overly dense woody vegetation. This approach would maintain a mosaic of open and closed canopy patches with irregular, oblong shapes that mimic natural scrub patterns, while avoiding rocky outcrops and other sensitive features. Retained scrub would include variable age classes to support habitat complexity and wildlife use, including nesting and foraging habitat for species such as dusky-footed woodrat (*Neotoma fuscipes),* California scrub-jay (*Aphelocoma californica*), and wrentit (*Chamaea fasciata*). For more information about species with the potential to occur in the area, see **Attachment B**, *Biological Resources Report*.
Manual thinning would be the primary method used to reduce fuel loads and achieve horizontal spacing, particularly in areas with sensitive biological resources such as riparian corridors and transitional zones between Douglas fir and montane hardwood habitats. Vegetation removal would be conducted in a way that retains the dominant scrub habitat type and avoids conversion to other habitat types. These specifications support both wildfire risk reduction and long-term habitat conservation goals in Humboldt County.

All treatments of shrub fuel types will be in compliance with laws and legal restrictions related to chaparral and potential type conversion.

[4] At the time of the adoption of this PSA, there is ongoing litigation regarding the use of the 2019 CalVTP PEIR (California Chaparral Institute v. Board of Forestry & Fire Protection). The Court has the 2019 CalVTP PEIR may not be used for CEQA compliance for proposed vegetation treatment in chaparral or coastal sage scrub, with certain exceptions for specific categories of treatment. Specifically, the VTP may still be used for limited-width strategic fuel breaks, maintenance of existing treatments, Wildland-Urban Interface treatments, ecological restoration treatments, and post-fire treatments.

Tree Fuel Type Prescription

Tree fuel types in the project area include mostly Douglas fir forest and montane hardwood, and mixed hardwood-conifer habitats, which are common throughout Humboldt County. These areas are dominated by native tree species such as Douglas fir, tanoak, Pacific madrone (*Arbutus menziesii*), canyon live oak (*Quercus chrysolepis*), huckleberry oak (*Quercus vacciniifolia*), and coast redwood (*Sequoia sempervirens*), with a diverse understory of California huckleberry, Howell's manzanita, and northern bracken fern (*Pteridium aquilinum* var. *pubescens*). Vegetation management within these fuel types is designed to reduce wildfire risk by reducing fire behavior within the fuel break, minimizing ladder fuels that could carry fire into the canopy and supporting the long-term health and regeneration of native forest communities. Selective thinning would be used to create shaded fuel breaks that retain the overstory canopy while removing lower branches, shrubs, and both live and dead vegetation that could facilitate vertical fire spread.

Manual treatment methods would be prioritized to preserve the natural appearance and ecological integrity of forested areas, especially in sensitive zones near riparian corridors or steep terrain. Where appropriate, mechanical equipment, targeted herbicide application, and prescribed burning may be used to achieve fuel reduction goals while maintaining habitat structure. Vegetation removal would be conducted in a way that retains the dominant forest type and avoids conversion to non-forest habitat. These prescriptions support both wildfire resilience and habitat conservation for species such as the dusky-footed woodrat, fisher (*Pekania pennanti*), black bear (*Ursus americanus*), and a wide range of native birds, amphibians, and reptiles.

GENERAL TREATMENT IMPLEMENTATION GUIDELINES

Timing of Initial Treatment and Duration

Project implementation of initial treatments is expected to start in Spring 2026 and to be completed in phases on an annual basis, depending on availability of funding, crews, and extended seasonal delays or unexpected disruption. Seasonal delays could include an extended or extreme fire season, requiring redirection of resources to other projects, or an extended winter with wet soil conditions that temporarily halt large equipment use. Project activities would continue annually, on a seasonal basis for approximately 10 years. Manual treatment activities would be permitted during saturated soil conditions.

Workers

The HCRCD, CAL FIRE crews, subcontractors, volunteers, and private landowners would conduct all treatment activities. Crew sizes would vary and would typically be fewer than 25 workers per site, per day. Multiple crews may work at the same time.

Site Access and Conditions

Treatment areas would be accessed via existing fire roads and trails. Private properties would be used as access points contingent on the landowner's consent. Vehicles and equipment would be staged at the contractor's yard daily or on site with landowner consent. Throughout the course of project implementation, the contractor would maintain road integrity, including maintaining drainage features. Garbage and construction debris would be regularly removed from all work sites.

Daily Treatment Schedule and Noise

All treatments would occur primarily on weekdays and Saturdays between 7:00 am and 6:00 pm, and during daylight hours only. If implementation of treatments is required on Sundays or holidays, work may occur

consistent with the Humboldt County Noise Ordinance. During prescribed burning, crews may need to conduct some maintenance burning on weekends to manage overall smoke impacts or burn later than 6:00pm. All noise-generating treatments would comply with local noise regulations, including the Humboldt County Noise Ordinance (Humboldt County 2025a).

Pests, Diseases, and Invasive Species

Without proper prevention, project treatments have potential to spread pathogens, diseases, pests, or invasive species. Invasive plants can be spread when crews and equipment travel between sites, transporting soil and mud contaminated with seeds. The goal of reducing invasive plant species within the Project area is in conformity with the overall Project goals of fuels reduction and wildfire prevention. Regularly updated, scientifically established guidance for invasive plant control and treatments is located on the California Invasive Plant Council (Cal-IPC) website (Cal-IPC 2020). Pests and diseases known to occur in the project area may pose risks to native vegetation, wildlife, and ecosystem health. Project activities would incorporate appropriate BMPs and mitigation measures to prevent the introduction or spread of invasive species, pathogens, and other biological threats, consistent with regional management guidelines and ecological best practices.

TREATMENT MAINTENANCE PRACTICES

Maintenance after the initial project activities will be managed by each individual landowner, with technical support and oversight from the HCRCD and Sanctuary Forest. Lost Coast Forestlands and Sanctuary Forest will maintain the fuel break through their regular vegetation management plans. The HCRCD and Sanctuary Forest will collaborate with the smaller landowners to develop fuel break maintenance routines that align with the treatment activities of the Project. Because vegetation communities are dynamic, treatment activities would be modified to reflect changes. Maintenance treatments are anticipated to follow the same methods as initial treatments but are subject to change depending on site response to initial treatment. At locations where intensive vegetation removal (e.g., prescribed burning) occurred, treatment maintenance may use more low intensity manual treatment activities in subsequent years.

The HCRCD and Sanctuary Forest would monitor the treated areas to maintain treatment of desired vegetation conditions. The HCRCD, Sanctuary Forest, and the Studebaker property will identify areas for priority in treatment maintenance to ensure that the space is maintained for maximum benefit. In tree habitat type, treatment maintenance may occur every 3 to 5 years. In shrub habitat type, treatment maintenance may occur every 1 to 5 years. In grass habitat type and areas where initial treatments were primarily manual, treatment maintenance may occur annually.

Throughout the treatment maintenance period, the HCRCD would consider the continued relevance of the PSA. Where the HCRCD determines that the PSA is no longer sufficiently relevant, the HCRCD would determine whether a new PSA or other environmental analysis is warranted. If more than 10 years have passed since approval of the latest PSA update, the HCRCD would update the PSA. For example, the HCRCD would conduct a reconnaissance survey to verify that conditions are comparable to those anticipated in the PSA. Any updates would be documented.

III. ENVIRONMENTAL CHECKLIST

VEGETATION TREATMENT PROJECT INFORMATION

1. **Project Title:** Vanauken Creek Fuel Break Project
2. **Project Proponent Name and Address:** Sanctuary Forest Inc. (SFI) in association with the Humboldt County Resource Conservation District (HCRCD)

   SFI address: 315 Shelter Cove Rd Ste 4, Whitethorn, CA 95589

   HCRCD address: 5630 South Broadway, Eureka, CA 95503
3. **Contact Person Information and Phone Number:**

   SFI contact: April Newlander; april@sanctuaryforest.org; 707-986-1087

   HCRCD contact: Jill Demers; jill@hcrcd.org; 707-296-3992
4. **Project Location:** Southern Humboldt County, in the vicinity of Whitethorn, CA
5. **Total Area to be Treated (acres):** 597
6. **Description of Project**: The proposed Project would involve conducting fuel reduction vegetation management activities on 597 acres near the community of Whitethorn in southern Humboldt County. See Section 2, above, for an expanded Project Description.

   a. **Initial Treatment**
   See Section 2 for an expanded Project Description.

   Treatment Types

   ☒ Wildland-Urban Interface Fuel Reduction

   ☒ Fuel Break

   ☐ Ecological Restoration

   Treatment Activities

   ☒ Prescribed Burning (Broadcast), 548 acres

   ☒ Prescribed Burning (Pile Burning), 348 acres

   ☒ Mechanical Treatment, 200 acres

   ☒ Manual Treatment, 348 acres

   ☐ Prescribed Herbivory, _____ acres

   ☐ Herbicide Application, _____ acres

   Fuel Type

   ☒ Grass Fuel Type

   ☒ Shrub Fuel Type

   ☒ Tree Fuel Type

b. **Treatment Maintenance:** Per Section 2, above, following initial project activities, ongoing vegetation treatment maintenance would be managed by individual landowners with technical support and oversight from the HCRCD and SFI. Maintenance would align with the original treatment methods but may be adjusted based on site response and changing vegetation conditions. Activities may include low-intensity manual treatments, especially in areas previously treated with intensive methods like prescribed burning. The HCRCD and SFI would monitor treated areas, coordinate with landowners to prioritize maintenance zones, and ensure defensible space is preserved.

7. **Regional Setting and Surrounding Land Uses:** The proposed Vanauken Creek Fuel Break Project would establish a strategically located fuel break in the Whitethorn area of southern Humboldt County, California. Situated within the fire-prone Lost Coast region, the project area includes steep terrain, mixed forest and shrub habitats, and a mix of private and conservation lands. The fuel break would reduce wildfire risk for nearby communities such as Whitethorn, Ettersburg, and Shelter Cove, while protecting key infrastructure including Briceland Road and local emergency access routes. The project would support broader regional fire resilience efforts in the Mattole River watershed and southern Humboldt County. . The fuel break would be implemented across a mix of ownerships, including private parcels and lands managed by SFI, Lost Coast Forestlands, and other local stakeholders.

8. **Other Public Agencies Whose Approval is Potentially Required**:

- SMP from NCUAQMD
- Burn permit from NCUAQMD
- Burn permit from CAL FIRE
- Waste discharge requirement from the San Francisco Regional Water Quality Control Board (RWQCB)
- Encroachment permits from local public works departments
- Informal consultation with California Department of Fish and Wildlife (CDFW)
- Informal consultation with USFWS
- Pesticide application permit from Humboldt County Agricultural Commissioner

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

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

the project proponent must begin consultation before the release of the environmental document and must follow the requirements of the cited PRC sections.

Pursuant to CalVTP SPR CUL-2, an updated Native American contact list and sacred lands file search was obtained from the Native American Heritage Commission (NAHC). The sacred lands data file indicated that no sacred sites occur within the project area or adjacent lands. On September 11, 2025, a letter was sent to the one tribal contact provided by the NAHC that requested any additional information regarding tribal resources and to notify the HCRCD if the Tribe has any information or concerns related to the Project. As of the filing date, no responses have been received. As planning proceeds, the HCRCD will continue to consult with interested tribal representatives regarding the Project and incorporate their concerns into Project planning and mitigation as warranted.

DETERMINATION (To be completed by the project proponent)

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

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

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

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

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

_____ _____
Signature Date

_____ _____
Printed Name Title

_____
Agency

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	Less than Significant (LTS)	Impact AES-1, pp. 3.2-16 – 3.2-19	Yes	AES-2, AQ-2, AQ-3, and REC-1	N/A	LTS	No	Yes
Impact AES-2: Result in Long-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from WUI Fuel Reduction, Ecological Restoration, or Shaded Fuel Break Treatment Types	LTS	Impact AES-2, pp. 3.2-20 – 3.2-25	Yes	AD-4, AES-1, and AES-3, and REC-1	N/A	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	Significant and Unavoidable (SU)	Impact AES-3, pp. 3.2-25 – 3.2-27	No	N/A	N/A	N/A	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

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

	Potentially Significant	**Less than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact AES-1

The Project would involve manual treatment (including thinning in riparian areas), mechanical treatment (such as mowing, chipping and masticating), prescribed burning (broadcast and pile), herbicide application, and biomass disposal. The potential for these treatment activities to result in short term substantial degradation of visual character was examined in the PEIR and found to be less than significant.

Portions of the treatment area would be visible from surrounding public roads, particularly where the project site adjoins Briceland Road. However, due to the topography of the area, and the lack of major roads within the project area, it is likely that portions of the treatment area would not be visible from any neighboring public roads. The closest officially designated state scenic highway is the access route to Shasta Dam Boulevard, approximately 90 miles to the northeast of the treatment areas (California Department of Transportation 2018). The closest state scenic highway which is eligible for designation is State Route (SR) 101, approximately 7.5 miles east of the treatment areas (California Department of Transportation 2018). There are no scenic areas designated by Humboldt County on or in close proximity to the project area. The visual character in the vicinity of the treatment areas is largely characterized by undeveloped forested areas, and small-scale developed areas such as the area around Thorn Junction. Viewers in the vicinity of the treatment areas would be mostly residents, passing motorists, or employees of local businesses.

Consistent with the PEIR, the presence of large equipment could contrast with the natural environment where publicly visible, such as adjacent to a public trail or roadway. However, project treatment activities would be temporary and would not dominate a view or block any views from scenic vistas or state scenic highways. Smoke from prescribed burning could also be visible from public viewpoints, and SR 101. Project activities would also not substantially degrade the existing visual character or quality of an area given that the treatment activities would be limited in geographic extent. The potential for the Project to result in short term substantial degradation of the visual character of the project area is within the scope of the PEIR because the proposed treatment activities and types of equipment proposed for use are consistent with those analyzed in the PEIR. SPRs applicable to the proposed treatments are AES-2, AQ-2, AQ-3, and REC-1, which require that: treatment-related equipment be stored outside of the public viewshed; require submittal of a Smoke Management Plan if the prescribed burning triggers the threshold (17 CCR Section 80160); require creation of a Burn Plan; and require notification of recreational users of any temporary recreation area closures.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing scenic resources are essentially the same within, adjacent to, and outside of the treatable landscape; therefore, the short-term aesthetic impact would also be the same, as described above. The impact of the Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact AES-2

Initial and maintenance treatments would include fuel breaks and WUI fuel reduction treatment types. The potential for these treatment types to result in long term degradation of the visual character of an area was examined in the PEIR and found to be less than significant. Treatments would occur on both public and private lands.

Please refer to the discussion under Impact AES-1 for an analysis of aesthetic impacts during treatment activities using mechanical and manual treatments and controlled burns.

Proposed project treatments (i.e., fuel reorganization and reduction) would result in a change to the visual character of the area. However, mature vegetation would remain in place to provide partial screening of

treatment areas and overall, these methods would largely preserve the natural appearance of the area and would therefore not substantially affect views.

As described in the PEIR, prescribed burning would result in grasses temporarily changing color from green or brown to a dark gray/black. Grass would regrow during the following spring, so this change would be temporary.

As described in Impact AES-1, it is likely that portions of the treatment area would not be visible from any public vantage points due to distance, existing vegetation and topography. The aesthetic impacts of the proposed treatments would be temporary and short term, and the natural characteristics of the treatment areas would remain following treatment. SPRs applicable to the proposed treatments are SPRs AD-4, AES-1, and AES-3, and REC-1, which require that proposed Project treatments be consistent with local plans, policies, and ordinances, that notifications would be made prior to the commencement of prescribed burning operations, that treatment-related equipment be stored outside of the public viewshed, that treatment area edges are feathered to create a natural transitional appearance, that vegetation screening is provided within and adjacent to treatment areas. Also, while there are no major known recreational opportunities in the area, should any temporary recreation area closures be required, recreational users would be notified. The proposed treatment activities are consistent with those analyzed in the PEIR, therefore, the potential for the Project to result in long term substantial degradation of the visual character of the project area is within the scope of the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing scenic resources are essentially the same within and outside of the treatable landscape; therefore, the short-term aesthetic impact would also be the same, as described above. The impact of the Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact AES-3

This impact does not apply to the Project because no non-shaded fuel breaks are proposed.

New Aesthetic and Visual Resource Impacts

The proposed treatments are consistent with the treatment types and activities covered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (per Sections 3.2.1, “Environmental Setting” and 3.2.2, “Regulatory Setting” in Volume II of the Final PEIR). The project proponent has also determined that the inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions pertinent to aesthetics and visual resources that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape. Therefore, the impacts would be the same and, for the reasons described above, impacts of the Project are consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impact. Therefore, no new impact related to aesthetics and visual resources would occur.

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	No	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 vegetation communities in the project area include annual grasslands, Douglas fir, and montane hardwood. There is no farmland within the project area, however, there is land designated as timberland, and zoned for timber production (see "Land Use and Planning, Population and Housing" (Humboldt County 2025b). The PEIR evaluated the potential for these treatments to result in forest land loss and determined the impact to be less than significant. This is because the proposed activities—such as thinning and burning—are intended to enhance forest health and reduce wildfire risk, without converting forest land to non-forest uses or changing its long-term ecological function. Any potential impacts related to forest land conversion fall within the scope of the PEIR, as the treatments are consistent with those previously analyzed.

The majority of vegetation within the treatment area consists of the tree fuel type. Implementation of the Project would alter forested land through selective thinning, resulting in a shaded fuel break that retains the tree canopy. This would be achieved through removal of select trees, branches, shrubs, and both living and dead vegetation that could facilitate the upward spread of fire from surface fuels to the forest canopy. Tree cover within woodlands and forested areas remaining after treatment would be consistent with the definition of

forest land used in Public Resources Code (PRC) Section 12220(g): land that can support 10 percent native tree cover of any species under natural conditions. The Project would not remove trees for commercial purposes and would not result in conversion of the dominant vegetation types. Therefore, the Project would not result in loss of forest land or conversion of forest land to non-forest use. This impact is within the scope of the PEIR because the treatment activities and intensity are consistent with those analyzed in the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. Within the project area, existing conditions within forested land are essentially the same within and outside of the treatable landscape. Therefore, the impact to forested land is also the same. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is present within the project area (California Department of Conservation [CDOC] 2025); therefore, no conversion of farmland would occur. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Agriculture and Forestry Resource Impacts

Treatments included in the Project are consistent with the treatments and activities that are considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the Project and determined that they are consistent with the environmental and regulatory settings stated in the CalVTP PEIR (Volume II, Sections 3.3.1 and 3.3.2). The project proponent has also determined that the inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the Project are also consistent with those covered in the PEIR. No changed circumstances would lead to new significant impacts not addressed in the PEIR. Therefore, no new impact related to agriculture and forestry resources would occur that is not covered in the PEIR.

AIR QUALITY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact AQ-1: Generate Emissions of Criteria Air Pollutants and Precursors During Treatment Activities that would exceed CAAQS or NAAQS	SU	Table 3.4-1; Impact AQ-1, pp. 3.4-26 – 3.4-32; Appendix AQ-1	Yes	AD-1, AD-4, AQ-1 through AQ-4, AQ-6	MM 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	None	NA	No Impact	No	Yes
Impact AQ-4: Expose People to Toxic Air Contaminants Emitted by Prescribed Burns and Related Health Risk	SU	Section 3.4.2; Impact AQ-4, pp. 3.4-35 – 3.4-37	Yes	AD-4, AQ-1, AQ-2, AQ-3, AQ-6	NA (no feasible mitigation available)	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	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	AD-4, AQ-1, AQ-2, AQ-3, AQ-6	NA (no feasible mitigation available)	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 Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Impact AQ-1

The use of vehicles, mechanical equipment, herbicides, and prescribed burning during initial and maintenance treatments would result in emissions of criteria pollutants that could exceed California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS) thresholds for the North Coast Air Basin. The potential for emissions of criteria pollutants to exceed CAAQS or NAAQS thresholds was examined in the PEIR and was found to be potentially significant. Emissions of criteria air pollutants related to the proposed treatment are within the scope of the PEIR because the associated equipment and duration of use are consistent with those analyzed in the PEIR.

The project is located within unincorporated Humboldt County and would be consistent with the North Coast Air Basin air quality thresholds. Although the project is situated in a rural area, private residences and other air quality-sensitive land uses may still be located near the project site and treatment activities and could be temporarily exposed to air quality emissions related to the project. The nearest sensitive receptors to the project include approximately 10 rural single-family residences located on Briceland Road, with the closest residence located approximately 100 feet west of the project site limits. The potential for treatment activities to cause substantial short-term increases in air quality emissions was addressed in the PEIR and was found to be less than significant. This impact is within the scope of the PEIR because the types of treatments and associated equipment, and thus the air quality emissions generated, are consistent with those analyzed in the PEIR.

The SPRs applicable to this treatment project are AD-1, AD-4, AQ-1 through AQ-4, and AQ-6, which require public notification for prescribed burning, compliance with applicable North Coast Unified Air Quality Management District (NCUAQMD) air quality requirements, submittal of a Smoke Management Plan (SMP) and Burn Plan if the prescribed burning triggers the threshold (17 CCR Section 80160), minimizing dust, and following all safety procedures required of a CAL FIRE crew. SPR AQ-5 would not apply because no naturally occurring asbestos (NOA), ultramafic rock outcrops, or former asbestos mines are mapped in or near the treatment area (U.S. Geological Survey [USGS] 2011, 2017; see also Attachment B). HRCD and its cooperating agencies would implement the emission reduction techniques included in MM AQ-1 to the extent feasible. However, because the treatments would be implemented by a public agency with limited funding, procuring or paying additional amounts for contractors that use equipment meeting the latest efficiency standards, including meeting the United States Environmental Protection Agency's (EPA's) Tier 4 emission standards, using renewable diesel fuel, using electric- and gasoline-powered equipment, and using equipment with Best Available Control Technology may be cost-prohibitive. Carpooling would be encouraged by HCRCD, but because crews may not all be employed with the same company, carpooling may not be feasible to implement for most of the workers. HCRCD would document the extent to which the agency and/or its contractors are able to implement MM AQ-1. Renewable diesel would be used by HCRCD and/or its contractors to the extent required by state regulations. For these reasons, and as explained in the PEIR, this impact would remain significant and unavoidable. In addition to the CalVTP PEIR SPRs and MMs, additional project-specific measures are described below each applicable measure.

- MM AQ-1: Implement On-Road Vehicle and Off-Road Equipment Exhaust Emission Reduction Techniques

HCRCD and/or SFI would document the extent to which the agency and/or its contractors are able to implement MM AQ-1 by documenting each unit's certified engine tier specification and applicable CARB fleet regulation compliance certificates prior to mobilization. This information would be compiled in an annual monitoring compliance report for the Project. Renewable diesel would be used by the agency and/or its contractors to the extent required by state regulations.

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

air quality conditions present and the relevant air basin in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the air quality impact 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 AQ-2

The use of vehicles and mechanical equipment during initial and maintenance treatments could expose people to diesel particulate matter emissions. The potential to expose people to diesel particulate matter emissions was examined in the PEIR and found to be less than significant. Diesel particulate matter (diesel PM) emissions from the proposed treatments are within the scope of the PEIR because the exposure potential is the same as analyzed in the PEIR, and the types and amount of equipment that would be used, as well as the duration of use, during proposed treatments are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are AQ-1, HAZ-1, NOI-4, and NOI-5, which require complying with air quality regulations, maintaining equipment, locating staging areas away from sensitive receptors, and limiting equipment idling time, respectively.

The inclusion of land that is outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. Approximately 4 acres of the 597-acre project site is located outside of the CalVTP treatable landscape. The inclusion of the minimal additional lands does not substantially affect the duration of treatment activities as they progress across treatment sites as described in the PEIR, and, thus, diesel PM generated by treatment activities would not take place near any single sensitive receptor for an extended period. Additionally, within the boundary of the project area, the air quality conditions and types of sensitive receptors (i.e., exposure potential) present in the areas outside the treatable landscape are essentially the same as those within or adjacent to the treatable landscape. Therefore, the air quality impact 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 AQ-3

This impact does not apply to the Project because no NOA, ultramafic rock outcrops, serpentine soils, or former asbestos mines are mapped in or near the treatment area and no serpentine soils or serpentine outcrops were observed during biological reconnaissance surveys (USGS 2011, 2017; see also Attachment B).

Impact AQ-4

Prescribed burning during initial and maintenance treatments could expose people to toxic air contaminants (TACs). The potential to expose people to TACs from prescribed burning was examined in the PEIR and found to be potentially significant. The duration and parameters of the prescribed burns are within the scope of the activities addressed in the PEIR, and within the North Coast Air Basin, air quality conditions are consistent with those analyzed in the PEIR for Humboldt County. Therefore, the potential for exposure to TACs is also within the scope of the PEIR. SPRs applicable to these treatment activities are AD-4, AQ-1, AQ-2, AQ-3, and AQ-6. All feasible measures to prevent and minimize smoke emissions, as well as exposure to smoke, are included in SPRs; however, this impact would remain significant and unavoidable, as explained in the PEIR.

The inclusion of land that is outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the air quality conditions present and the relevant air basin in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the air quality impact 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 AQ-5

The use of vehicles and mechanical equipment during initial and maintenance treatments could expose people to objectionable odors from diesel exhaust. The potential to expose people to objectionable odors from diesel exhaust was examined in the PEIR and found to be less than significant. This impact is within the scope of the PEIR because the exposure potential and the proposed activities, as well as the associated equipment and duration of use, are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are HAZ-1, NOI-4, and NOI-5, which would require equipment maintenance, limiting vehicle idling time to 5 minutes, and notification of off-site sensitive receptors.

The inclusion of land that is outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the air quality conditions and types of sensitive receptors present in the areas outside the treatable landscape are essentially the same as those within, or adjacent to, the treatable landscape; therefore, the air quality impact 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 AQ-6

Prescribed burning during initial and maintenance treatments could expose people to objectionable odors. The potential to expose people to objectionable odors from prescribed burning was examined in the PEIR and found to be potentially significant. The duration and parameters of the prescribed burn treatment and the exposure potential are consistent with the activities addressed in the PEIR. Therefore, the resultant potential for exposure to objectionable odors from smoke is also within the scope of impacts covered in the PEIR. SPRs that are applicable to this treatment project are AD-4, AQ-1, AQ-2, AQ-3, and AQ-6. All feasible measures to prevent and minimize smoke odors, as well as exposure to smoke odors, are included in SPRs; however, this impact would remain significant and unavoidable, as explained in the PEIR.

The inclusion of land that is outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the air quality conditions present and types of sensitive receptors in the areas outside the treatable landscape are essentially the same as those within, or adjacent to, the treatable landscape; therefore, the air quality impact 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 Air Quality Impacts

The proposed treatments are consistent with the treatment types and activities covered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (refer to Sections 3.4.1, “Regulatory Setting,” and 3.4.2, “Environmental Setting,” in Volume II of the Final PEIR). The inclusion of approximately 4 acres that is outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR, but the added acreage would not expand the total annual acreage of 250,000 acres per year proposed for treatment under the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to air quality that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they are immediately adjacent to each other, the air basin is the same, and the treatment activities and associated air emissions are the same. Therefore, the impacts are the same and, for the reasons described above, impacts of the proposed treatment project are consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside the CalVTP treatable landscape would not give rise to any new significant impact not addressed in the PEIR. No new impact related to air quality that is not covered in the PEIR would occur. Therefore, no new impact related to air quality would occur.

ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact CUL-1: Cause a Substantial Adverse Change in the Significance of Built Historical Resources	LTS	Impact CUL-1, pp. 3.5-14 – 3.5-15	Yes	CUl-1, CUL-7, CUL-8	NA	LTS	No	Yes
Impact CUL-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources or Subsurface Historical Resources	SU	Impact CUL-2, pp. 3.5-15 – 3.5-16	Yes	CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, CUL-8	CUL-2	LTS with MM	No	Yes
Impact CUL-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource	LTS	Impact CUL-3, p. 3.5-17	Yes	CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, CUL-6, CUL-8	NA	LTS	No	Yes
Impact CUL-4: Disturb Human Remains	LTS	Impact CUL-4, p. 3.5-18	Yes	NA	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

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

	Potentially Significant	**Less than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

A cultural resources assessment report has been prepared for the project area (**Attachment C**). The methods performed for this report included a background records search consistent with SPR CUL-1, notifications to local Native American representatives consistent with SPR CUL-2, cultural resource research consistent with SPR CUL-3, and a stratified sampling-approach pedestrian survey of the project area consistent with SPR CUL-4. A record search was requested at the Northwest Information Center (NWIC) to determine whether any portions of the project area had been previously surveyed for cultural resources and to identify the presence of any previously recorded cultural resources within the Project area, as well as a 0.25-mile buffer (the search radius). The records

search was received on June 10, 2025 (NWIC File No. 24-1822). Other sources of information that were reviewed included, but were not limited to, the current listings of properties on the National Register of Historic Places (NRHP), California Historical Landmarks, California Register of Historical Resources (CRHR), California Points of Historical Interest as listed in the Office of Historic Preservation's (OHP's) Historic Property Directory, and the Built Environment Resource Directory for Humboldt County (OHP 2025).

Two resources have been previously recorded within the project area. Three resources and one informal resource have been previously recorded within the search radius. No CRHR- or NRHP-listed historical resources or properties have been recorded within the treatment area or the search radius.

According to the record search results, the boundaries of 6 previous studies intersect the project area.

In addition to the above records search, a pedestrian survey was conducted by Montrose Environmental (Montrose) archaeologists on July 15, 16, and 17, 2025. Due to the extensive steep topography in the project area, the survey strategy was stratified to consider both slope and accessibility. That is, some portions of the project area that represented slopes of 10 percent or lower, were over 2 acres in area, and were within proximity of a stream or confluence were subjected to more intensive survey techniques (transects of 20-meters or less). Not all areas that represent these flat slopes were surveyed due to their isolation within areas surrounded by steep hillsides. Other areas that represented slopes between 10 and 20 percent were surveyed using wider intervals, or 20- to 40-meter intervals, based on sensitivity and accessibility. All other areas were not subject to pedestrian survey due to the steepness of the slopes (>20 percent) or that were isolated within areas surrounded by steep mountainous areas where the travel costs on foot would minimize the potential for long-term habitation or settlement by prehistoric populations (Byrd et al. 2017). No evidence of archaeological deposits was identified throughout the surveys. Approximately 190-acres were subject to survey.

Consistent with CalVTP SPR CUL-2, an updated Native American contact list and sacred lands file search was obtained from the NAHC on May 16, 2025. The sacred lands data file indicated no sacred land had previously been recorded within the project area or adjacent lands. On September 11, 2025, the HCRCD sent letters to the one tribal contact provided by the NAHC, the Bear River Band of Rohnerville Rancheria. The letter requested information regarding Tribal resources and asked the tribe to notify the HCRCD if they wished to initiate consultation regarding the project actions. No response has been received to date.

Impact CUL-1

The potential for vegetation treatment activities that cause ground disturbance to cause adverse effects to historical resources (those resources evaluated as eligible for listing in the CRHR), was examined in the PEIR and found to be less than significant. According to the NWIC records search and surveys conducted for the Project, no elements of the historic-era built environment were previously identified within the project area.

Any impact to potential historical resources including, but not limited to structures, buildings, or foundations, would be avoided due to the lack of any proposed demolition or material alteration of a structure or building or overall setting, in accordance with SPR CUL-7. This potential impact is within the scope of the PEIR, because the treatment activities and the intensity of ground disturbance that would occur under the Project are consistent with those analyzed in the PEIR. SPRs applicable to this impact are CUL-1, CUL-7, and CUL-8. As described above, archaeological and historical resource record searches have been conducted in accordance with SPR CUL-1. SPR CUL-7 requires the avoidance of known built historical resources and the avoidance of built-environment structures that have not yet been evaluated for historical significance and SPR CUL-8 requires worker training regarding protection of historical resources.

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

Impact CUL-2

Vegetation treatment activities would include mechanical treatments that use heavy equipment that could result in ground disturbance as vegetation is removed, which could result in adverse impacts to unknown historical resources (archaeological sites) or unique archaeological resources if present within a treatment area. According to the NWIC records search, two previously recorded resources are located within the project area. One resource, P-12-003644, was re-identified during the pedestrian survey. The location of the other resource, P-12-003645, was revisited but the resource was not observed; P-12-003645 may have been disturbed due to activity associated with the adjacent road or obscured by vegetation.

While not all of P-12-003644's previously recorded components were observed during the pedestrian survey, the site's overall condition appears to have remained unchanged since its original recordation in 2016. P-12-003644 is located within one of the shaded fuel break treatment areas; treatment measures associated with the creation of the shaded fuel break are not expected to disturb the surface beyond a depth of 1 to 2 feet. Although this site has not been evaluated for listing in the CRHR, it can be assumed that there is potential for this site to yield information important to California history. Consequently, the site's boundaries will be protected in their entirety through the establishment of an Environmentally Sensitive Area (ESA) consistent with SPR CUL-5 (see Archaeological Survey Report, Attachment C). According to SPR CUL-5, in the event that cultural resources cannot be avoided, a qualified archaeologist, in consultation with culturally affiliated tribes, will develop protection measures to ensure that damaging effects to the cultural resources will not occur. Although it is assumed that the resource can be avoided, a measure such as the establishment of an ESA can ensure that the site is avoided from potential impacts.

With the implementation of these measures, no impact to the known resources is expected to occur from the proposed activities. However, subsurface components of these sites may exist within the areas of proposed activity.

The potential for treatment activities to result in disturbance to, damage to, or destruction of archaeological resources was examined in the PEIR and found to be significant. This impact would be less than significant for the Project with implementation of SPRs and mitigation. This impact is within the scope of the PEIR because the treatment activities and the intensity of ground disturbance that would occur under the proposed project are consistent with those analyzed in the PEIR. SPRs applicable to this impact are CUL-1 through CUL-5 and CUL-8. As described above, methods consistent with SPR-1 through SPR-4 have been implemented for the purposes of this PSA. Further, SPR CUL-8 will be implemented, which requires worker training regarding the protection of sensitive archaeological, historical, and Tribal cultural resources. MM CUL-2 would also apply to this treatment to protect any inadvertent discoveries of archaeological resources.

The inclusion of land that is outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment 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 of the Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact CUL-3

As previously summarized, the Native American contacts identified by the Native American Heritage Commission (NAHC) were sent a request for information via email on September 11, 2025, consistent with the requirements of SPR CUL-2. To date, no response has been received. The potential for treatment activities to cause a substantial adverse change in the significance of a Tribal cultural resource was examined in the PEIR. Proposed treatment activities include manual and mechanical treatment activities that may require ground disturbance, as well as the potential use of herbicides, which may adversely affect ethnobotanicals or material culture that may have Tribal importance. The potential for the proposed treatment activities to cause a substantial adverse change in the significance of a Tribal cultural resource during vegetation treatment was examined in the PEIR and found to be less than significant with the implementation of SPR CUL-6.

As planning proceeds, additional information provided by Tribes during the consultation process may identify the potential for a substantial adverse change to a Tribal cultural resource to result from project-related actions, and measures to protect the resource shall be formulated consistent with SPR CUL-6, which, upon implementation, would avoid any substantial adverse change to any Tribal cultural resource. The potential for adverse effects on Tribal cultural resources during implementation of the Project is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and intensity of ground disturbance are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are CUL-1 through CUL-6 and CUL-8. SPRs CUL-1 through CUL-4 have been conducted during preparation of this PSA. SPR CUL-5 and CUL-6 require consulting with the geographically affiliated Tribes to avoid and protect any resources identified, and SPR CUL-8 requires worker training regarding the protection of sensitive archaeological, historical, and Tribal cultural resources.

The inclusion of land that is outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential for tribal cultural resources 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 impact of the Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact CUL-4

Vegetation treatment activities would include mechanical treatments that use heavy equipment that could result in ground disturbance as vegetation is removed, which could uncover human remains, if present in a treatment area. The potential for treatment activities to uncover human remains was examined in the PEIR and found to be less than significant. The NWIC records search did not identify any previously recorded burials or sites that have the potential to contain human remains. This impact is within the scope of the PEIR because the intensity of ground disturbance under the Project is consistent with what was analyzed in the PEIR. Additionally, consistent with the PEIR, the Project would comply with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 in the event of a discovery.

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

New Archaeological, Historical, and Tribal Cultural Resource Impacts

The Project treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the Project and determined they are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Sections 3.5.1, "Environmental Setting," and 3.5.2, "Regulatory Setting," in Volume II of the Final PEIR). The project proponent has also determined that the inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a changed circumstance to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, the existing environmental and regulatory conditions pertinent to archaeological, built historical resources, or Tribal cultural resources that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the Project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new or more severe significant impacts. Therefore, no new impact related to archaeological, historical, or Tribal cultural resources would occur.

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-3, BIO-6, BIO-7, BIO-9, AQ-3, AQ-4, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HAZ-5, HAZ-6, HYD-5	BIO-1a, BIO-1b, BIO-1c	LTSM	No	Yes
Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications	LTS (all wildlife species except bumble bees) S&U (bumble bees)	Impact BIO-2, pp 3.6-138–3.6-184	Yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-6, BIO-9, BIO-10, BIO-11, BIO-12, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HAZ-5, HAZ-6, HYD-1, HYD-4, HYD-5	BIO-2a, BIO-2b, BIO-2c, BIO-3a, BIO-3b, BIO-3c	LTSM	No	Yes
Impact BIO-3: Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation that Leads to Loss of Habitat Function	LTS	Impact BIO-3, pp 3.6-186–3.6-191	Yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-6, BIO-9, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HAZ-5, HAZ-6, HYD-4	BIO-3a, BIO-3b, BIO-3c	LTSM	No	Yes
Impact BIO-4: Substantially Affect State or Federally Protected Wetlands	LTS	Impact BIO-4, pp 3.6-191–3.6-192	No	NA	NA	No impact	No	Yes
Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries	LTS	Impact BIO-5, pp 3.6-192–3.6-196	Yes	BIO-1, BIO-4, BIO-10, BIO-11, HYD-4	BIO-5	LTSM	No	Yes

Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife	LTS	Impact BIO-6, pp 3.6-197–3.6-198	Yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-12, HYD-4	BIO-2a, BIO-2b, BIO-2c, BIO-3a, BIO-3b	LTSM	No	Yes
Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources	No Impact	Impact BIO-7, pp 3.6-198–3.6-199	Yes	AD-3	NA	No Impact	No	Yes
Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan	No Impact	Impact BIO-8, pp 3.6-199–3.6-200	No	NA	NA	No Impact	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

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

	Potentially Significant	**Less than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

Pursuant to SPR BIO-1, a qualified biologist conducted a data review of the biological resources setting, species and sensitive natural communities tables, and habitat information in the PEIR for the ecoregion of the project treatment area. The project area is located in the Northern California Coast ecoregion described in the PEIR. A reconnaissance-level survey of biological resources in the project area was completed on July 15 and 16, 2025. Habitat and vegetation types were identified using data modeled by CAL FIRE's Fire and Resource Assessment Program (FRAP), which was verified by aerial imagery and field observations during the biological reconnaissance survey (CAL FIRE 2022). A list of special-status plant and wildlife species with potential to occur in the treatment area was compiled by reviewing the following pertinent literature and database queries:

- U.S. Fish and Wildlife Service (USFWS), Information for Planning and Conservation (IPaC) list of federally endangered and threatened species (USFWS 2025b);
- USFWS's Critical Habitat Portal (USFWS 2025a);
- National Marine Fisheries Service Species and Habitat mapping application (NMFS 2025b);

- West Coast managed species list (NMFS 2025a);
- A query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) for special-status species occurrence records within five miles of the Study Area (CDFW 2025a);
- A query of the California Department of Fish and Wildlife (CDFW) Spotted Owl Observations Database for occurrence records within five miles of the Study Area (CDFW 2025c);
- A query of the California Native Plant Society (CNPS) Inventory or Rare and Endangered Plants for special-status plant species records within the 8 USGS 7.5-minute quadrangles surrounding and encompassing the Study Area: Garberville, Ettersburg, Honeydew, Miranda, Bear Harbor, Piercy, Shelter Cove and Briceland (CNPS 2025);
- eBird records from the Study Area vicinity (Cornell Lab of Ornithology 2025).

Database reviews resulted in a list of 15 special-status plant species and 16 special-status wildlife species known to occur in the general region of the project area. A full list of all special-status species reviewed along with habitat descriptions and an assessment of their potential to occur in the project area is included under Appendix C of the Biological Resources Report. For each species, the potential to occur in the project area was assessed as present, possible, not expected, or none. Species determined to be present or have the potential to occur (i.e., possible, or not expected) are listed below in **Table BIO-1**. Eight special-status plant species and ten special-status wildlife species were determined to potentially occur within the project area.

Pursuant to SPR BIO-1, sensitive natural communities and sensitive habitats as well as additional vegetation communities were identified using CAL FIRE's Fire and Resource Assessment Program (FRAP) vegetation layer, aerial imagery (Google Earth 2025) and field observations. While CAL FIRE's FRAP vegetation layer mapped montane-hardwood conifer as the predominant vegetation community in the project area, field observations identified Douglas fir habitat and montane-hardwood habitat as the two dominant vegetation communities. The project area contains the following vegetation communities: Douglas fir, montane-hardwood and annual grassland. Refer to Attachment B, *Biological Resources Report,* for more information.

Table BIO-1: Special-Status Plant and Wildlife Species with Potential to Occur within the Project Area

Table BIO-1a. Special-Status Plant Species

Scientific Name **Common Name**	**Listing Status* (Federal/ State/CNPS)**	**Life Form**	**Habitat Association**	**Potential to Occur in the Project Area**
Astragalus agnicidus Humboldt County milk-vetch	-/SE/1B.1	Perennial herb	Broadleafed upland forest, North Coast coniferous forest. Disturbed openings in partially timbered forest lands; also along ridgelines; south aspects. 525 to 2198 feet elevation. Blooms April to September.	**Possible.** Suitable woodland habitat is present in the Study Area and the Study Area is within the known elevation range of this species. The fuel break areas are located along ridgelines and based on information from the Sanctuary Forest, the northern portion of the Study Area was previously logged (Stillwater Sciences 2021). There are no CNDDB occurrences within five miles; however, there is one Jepson eFlora record within five miles of the Study Area (Jepson Flora Project 2025).
Erythronium oregonum giant fawn lily	- / - / 2B.2	Perennial herb	Cismontane woodland, meadows and seeps. Openings in woodland. Sometimes on serpentine; rocky sites. 984 to 4708 feet elevation. Blooms March to June.	**Possible.** Serpentine soil is not present in the Study Area (NRCS 2025a). Biologists generally observed dense mixed conifer habitat with thick understory during the biological reconnaissance survey; however, it is likely there are openings within woodland habitat located throughout the Study Area where this species may occur. Study Area is within the known elevation range of this species. There are no known occurrences within five miles of the Study Area.
Erythronium revolutum coast fawn lily	-/-/2B.2	Perennial bulbiferous herb	Bogs and fens, broadleafed upland forest, north coast coniferous forest. Mesic sites; stream banks. 197 to 4610 feet election. Blooms March to July.	**Possible.** Vanauken Creek and unnamed tributaries to Vanauken Creek may provide suitable habitat for this species. While there are tributaries of McKee Creek that overlap the Study Area, these waterways were observed to be dry during the biological reconnaissance survey and likely do not provide year-round mesic areas suitable for this species. The Study Area is within the known elevation range for this species. While there are no known occurrences within five miles of the Study Area, it is possible this species may occur in portions of the Study Area that overlap with Vanauken Creek and its unnamed tributaries.
Kopsiopsis hookeri small groundcone	-/-/2B.3	Perennial rhizomatous herb (parasitic)	North coast coniferous forest. Open woods, shrubby places; parasitic, generally on *Gaultheria shallon*, occasionally on *Arbutus menziesii, Arctostaphylos uva-ursi*. 394 to 4708 feet elevation. Blooms April-August.	**Possible.** There are no known occurrences within five miles of the Study Area. However, suitable coniferous forest habitat is present. *Gaultheria shallon* is common in coniferous forest understory and is known to occur in coastal areas (Calscape 2025a). Biologists observed *Gaultheria shallon* and *Arbutus menziesii* throughout the Study Area during the biological reconnaissance survey.

Scientific Name **Common Name**	**Listing Status* (Federal/ State/CNPS)**	**Life Form**	**Habitat Association**	**Potential to Occur in the Project Area**
Montia howellii Howell's montia	-/-/2B.2	Annual herb	Meadows and seeps, north coast coniferous forest, vernal pools. Vernally wet sites; often on compacted soil. 33 to 3297 feet elevation. Blooms March-May.	**Possible.** There is one historic (1923) CNDDB occurrence mapped approximately 0.75 mile south of the Study Area and the CNDDB record states the species was found on wet ground along a creek. North coast coniferous forest is present in the Study Area and wet areas along Vanauken Creek, and associated tributaries may provide suitable habitat for Howell's montia.
Piperia candida white-flowered rein orchid	-/-/1B.2	Perennial herb	North coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Sometimes on serpentine soil. Forest duff, mossy banks, rock outcrops, and muskeg. 148 to 5299 feet elevation. Blooms May-September.	**Possible.** Suitable coniferous forest habitat is present in the Study Area and the Study Area is within the known elevation range for this species. There are thirteen CNDDB occurrences from 2012 and 2019 mapped with five miles of the Study Area. There are two occurrences (2019) mapped within 1.5 miles east and southeast of the Study Area.
Pleuropogon hooverianus North Coast semaphore grass	-/ST/1B.1	Perennial rhizomatous herb	Broadleafed upland forest, meadows and seeps, North Coast coniferous forest. Wet grassy, usually shady areas, sometimes freshwater marsh; associated with forest environments. Blooms April-June. 35 to 2200 feet elevation.	**Not expected.** This species has a limited distribution range and is primarily known from Marin, Sonoma and Mendocino Counties, with one occurrence in Humboldt County (California Department of Fish and Wildlife 2014; Calflora 2025). The nearest known occurrence is mapped approximately 9.2 miles east of the Study Area. Suitable habitat may be present in the grassland habitat in the southern portion of the Study Area.
Sidalcea malviflora ssp. *patula* Siskiyou checkerbloom	-/-/1B.2	Perennial rhizomatous herb	Coastal bluff scrub, coastal prairie, north coast coniferous forest. Open coastal forest; bluffs; roadcuts. 16 to 4117 feet elevation. Blooms May-August.	**Not expected.** Suitable open coastal forest habitat is limited in the Study Area but may be present among openings of grassland habitat in the southern portion of the Study Area. The nearest CNDDB occurrences are mapped approximately nine miles east of the Study Area; and indicate the species was found along meadow edges, weedy pasture fence lines, and with poison oak and other brush on the edge of a sloping wet meadow.

* Abbreviations for Species Status:

FE = Federal Endangered
FT = Federal Threatened
FC = Federal Candidate
SC = State Candidate
SE = State Endangered (California)
ST = State Threatened (California)
SR = State Rare (California)
SSC = Species of Special Concern
FP= Fully Protected

California Rare Plant Rank (CRPR)
1A = Presumed extirpated in California and rare or extinct elsewhere
1B = Rare, threatened, or endangered in California and elsewhere
2A = Presumed extirpated in California but common elsewhere
2B = Rare, threatened, or endangered in California but more common elsewhere

CRPR Threat Rank
0.1 = Seriously threatened in California
0.2 = Moderately threatened in California
0.3 = Not very threatened in California

Source: CDFW 2025.

Table BIO-1b. Special-Status Wildlife Species

Invertebrates

Scientific Name **Common Name**	**Listing Status* (Federal/State)**	**Habitat**	**Potential to Occur in the Project Area**
Danaus plexippus monarch butterfly	FPT/-	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**None (overwintering sites)/Possible (breeding/migrating).** There are no CNDDB occurrences within five miles of the Study Area, however, this species is listed on the IPaC resource list. This species is not known to overwinter in Humboldt County, generally overwintering in wooded sites from Mendocino County south to Baja, California. However, monarch butterflies are known to breed in the summer and spring in Humboldt County (Jepson et al. 2015) and may potentially migrate through the area. Narrow-leaf milkweed (*Asclepias fascicularis*) is native to Humboldt County and is known to grow in grassland habitat and while no milkweed plants were observed during the biological reconnaissance survey, it is possible it may occur in the meadow in the southern/central portion of the Study Area (Calscape 2025b).

Amphibians

Scientific Name **Common Name**	**Listing Status* (Federal/State)**	**Habitat**	**Potential to Occur in the Project Area**
Rana boylii pop. 1 foothill yellow-legged frog – north coast DPS	- / SSC	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	**Present.** There is one CNDDB occurrence from 2018 mapped to Vanauken Creek within the Study Area. The record indicates one adult was observed, but it was recorded that numerous foothill yellow-legged frogs were observed within a 1200-meter survey reach along Vanauken Creek. Suitable overwintering and dispersal habitat may also be present in tributaries of McKee Creek and Vanauken Creek within the Study Area during the wet season. During a wet year, this species may be found year-round in the portion of Vanauken Creek that overlaps the southern portion of the Study Area.
Rhyacotriton variegatus southern torrent salamander	- / SSC	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats; old growth forest. Found in cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rock within trickling water.	**Not expected.** This species is predominantly aquatic. In northwestern California, this species exhibits a strict association with headwaters and low order tributaries (Welsh et al. 1996). This species is commonly associated with high-gradient streams which are not present in the Study Area (Thomson et al. 2016). Riparian corridors are important foraging habitat for this species (USFWS 2000). There is a CNDDB occurrence (late 1980s/early 1990s) mapped approximately 1.75 miles west of the Study Area. The record indicates the detection was made in Nooning Creek, a tributary of the Mattole River.
Taricha rivularis red-bellied newt	-/SSC	Broadleaved upland forest, north coast coniferous forest, redwood, riparian forest, and riparian woodland. Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles	**Possible.** Suitable habitat is present in the Study Area. The nearest CNDDB occurrence (1974) is mapped approximately 0.5 mile west of the Study Area. The record indicates two specimens were collected near the intersection of Shelter Cove Road and Mattole River.

Scientific Name **Common Name**	**Listing Status* (Federal/State)**	**Habitat**	**Potential to Occur in the Project Area**
		generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	

Reptiles

Scientific Name **Common Name**	**Listing Status* (Federal/State)**	**Habitat**	**Potential to Occur in the Project Area**
Actinemys marmorata northwestern pond turtle	FPT/SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Need basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 km from water for egg-laying.	**Not expected.** There is one CNDDB occurrence (2006) mapped approximately 4.75 mile north of the Study Area; the occurrence is mapped to the Mattole River. Numerous observations from iNaturalist are present within the vicinity of the Study Area in Mattole River and Painter Creek (iNaturalist 2025). Vanauken Creek, associated tributaries and associated tributaries of McKee Creek did not provide suitable aquatic habitat for the species based on a lack of suitable basking sites. However, this species is known to travel up to 500 meters to overwinter in shrubby/forested areas where a deep layer of detritus is present (Western Pond Turtle Range-wide Conservation Coalition 2020). The grassy meadow within 0.3 km of the Mattole River and forest habitat may provide suitable upland habitat for this species.

Fish

Scientific Name **Common Name**	**Listing Status* (Federal/State)**	**Habitat**	**Potential to Occur in the Project Area**
Oncorhynchus kisutch pop. 2 coho salmon - southern Oregon / northern California ESU	FT/ST	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	**Present.** There are two CNDDB occurrences from 1994 mapped approximately 2.5 miles northwest of the Study Area; the occurrences are mapped to Eubanks Creek and Big Finley Creek above the confluence with the Mattole River. This species is known to spawn and rear in the Mattole River as well as its tributaries including Vanauken Creek (Stillwater Sciences 2024). This species may occur in the portions of Vanauken Creek and its tributaries that overlap the southern portion of the Study Area.
Oncorhynchus mykiss irideus pop. 48 steelhead - northern California DPS summer-run	FT / -	Summer-run steelhead are known to migrate further inland than winter-run steelhead. Seek refuge in deep pools with a preference for pools that have large boulders or woody debris for protection from predators. DPS includes Redwood Creek, Mad River, Eel River and Mattole Rivers. Spawn in December to	**Present.** This species is known to occur in the Mattole River and its tributaries. Deep pools suitable for spawning during the summer months may be present along Vanauken Creek and its tributaries.

Scientific Name **Common Name**	**Listing Status* (Federal/State)**	**Habitat**	**Potential to Occur in the Project Area**
		February. Tolerant of water temperatures up to 73 degrees Fahrenheit.	
Oncorhynchus mykiss irideus pop. 49 steelhead - northern California DPS winter-run	FT/SSC	DPS includes Redwood Creek, Eel River and Mattole Rivers and their tributaries. Winter run steelhead enter freshwater environments such as estuaries and rivers sexually mature. Generally, factors such as temperature and water flow are not significant to migration unlike the summer-run DPS. Spawns December through April.	**Present.** There is a CNDDB occurrence from 2021 mapped to Mattole River and its tributaries including Vanauken Creek. The record indicates in 2015 surveyors estimated the spawning population to be "likely more than 1000." Suitable habitat is present in Vanauken Creek in the southern portion of the Study Area.
Oncorhynchus tshawytscha pop. 17 Chinook salmon – California coastal ESU	FT/-	Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Cr, Humboldt Co and Russian River, Sonoma Co.	**Possible.** While there are no CNDDB occurrences for this species within five miles, the Study Area is mapped to Essential Fish Habitat for chinook salmon. While marginal spawning and rearing habitat is present in Vanauken Creek, this species may occur at the confluence of the Mattole River and Vanauken Creek especially during high flows (NOAA 2005; Stillwater Sciences 2024).

Birds

Scientific Name **Common Name**	**Listing Status* (Federal/State)**	**Habitat**	**Potential to Occur in the Project Area**
Strix occidentalis caurina Northern spotted owl	FT/ST	Inhabit old-growth forests or mixed stands of old-growth and mature trees including Douglas-fir, redwood forests, mixed evergreen and hardwood, ponderosa pine, white fir, and grand fir. Occasionally found in younger forests with patches of big trees.	**Present.** Eight positive occurrences are mapped within or in the immediate vicinity of the Study Area by the CDFW Spotted Owl Observations Database. Two of the eight occurrences from 2000 are recorded as nests and three occurrences are recorded as activity centers. One of the nest occurrences records a nest in a Douglas fir tree. An additional occurrence within five miles indicates a nest in a Pacific madrone tree. While there is a lack of old-growth forest present, biologists observed mature Douglas fir, Pacific madrone and tanoak trees that may provide suitable nesting habitat for this species. There is also foraging habitat located throughout the Study Area.

Mammals

Scientific Name **Common Name**	**Listing Status* (Federal/State)**	**Habitat**	**Potential to Occur in the Project Area**
Arborimus pomo Sonoma tree vole	- / SSC	North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	**Possible.** There is suitable habitat for Sonoma tree vole in the Study Area. The nearest CNDDB occurrence (1994) is mapped approximately 1.5 miles southeast of the Study Area; the record indicates a nest and resin ducts were observed in Douglas-fir and tanoak saplings. A vole was observed in the resin ducts.

* Abbreviations for Federal and State Species Status:

FE = Federal endangered
FT = Federal threatened
FC = Federal candidate
FPT = Federal proposed threatened

SE = State endangered
ST = State threatened
SC = State candidate
SSC = Species of special concern (CDFW)
FP = Fully protected (CDFW)

Source: CDFW 2025.

Impact BIO-1

Literature and database reviews resulted in a list of 15 special-status plant species known to occur in the region. Table BIO-1 above includes the habitat description and analysis conducted to evaluate each special-status plant species potential to occur. Of the 15 special-status plant species known from the region, eight were determined to have potential to occur within the project area based on results of reconnaissance-level surveys and habitat present within the project: Humboldt County milk-vetch, giant fawn lily, coast fawn lily, small groundcone, Howell's montia, white-flowered rein orchid North Coast semaphore grass and Siskiyou checkerbloom. There are no known occurrences of these species within the Project area. No special-status plant species were observed during the biological reconnaissance survey, though field efforts took place outside of the blooming period for giant fawn lily and did not include full coverage of the entire treatment area.

Treatment activities that have potential to alter the project area, such as burning, mechanical and manual treatments, and herbicide use, may result in direct or indirect adverse effects to special-status plant species. The potential for adverse effects to special-status plants is within the scope of the activities and impacts addressed in the PEIR because the activities and level of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. While treatment activities may indirectly or directly impact special status plant species through habitat modifications, treatment activities may also result in improving habitat conditions by removing invasive plant species, restoring the natural fire return interval, clearing debris build-up and thinning tree canopy. The standard project requirements (SPRs) that apply to this impact include BIO-1 (conducting a data review and reconnaissance-level survey), BIO-2 (environmental resource training for all personnel), BIO-3 (protocol-level survey for sensitive natural communities and sensitive habitats), BIO-6 (prevent spread of plant pathogens), BIO-7 (conducting a protocol-level survey for special status plant species), and BIO-9 (preventing the spread of invasive species), AQ-3 (creating a burn plan following the CAL FIRE burn plan template), AQ-4 (minimizing dust during treatment activities), GEO-1 (suspending all activities during rain events), GEO-3 (stabilizing soil disturbance), GEO-4 (monitoring for erosion and implementing erosion control), GEO-5 (draining stormwater via water breaks), and GEO-7 (minimizing erosion), HAZ-5 (spill prevention and response plan), HAZ-6 (comply with herbicide application regulations) and HYD-5 (protect non-target vegetation and special-status species from herbicide). In addition to the SPRs, the following MMs are applicable: BIO-1a (avoid loss of special-status plants listed under ESA [Endangered Species Act] or CESA [California Endangered Species Act]), BIO-1b (avoid loss of special-status plants not listed under ESA or CESA), and BIO-1c (compensate for unavoidable loss of special-status plants). Pursuant to BIO-1a through BIO-1c, loss of special status plant species would be avoided and should loss be unavoidable, a Compensatory Mitigation Plan would be developed. A detailed analysis of potential impacts to special-status plant species is included below.

Humboldt County milk-vetch and **North Coast semaphore grass** are listed as endangered and threatened, respectively, under CESA. Suitable habitat in the Study Area for Humboldt County milk-vetch, a perennial herb, includes disturbed openings in partially timbered forest lands, along ridgelines and on south aspects in North Coast coniferous forest. Based on information from the Sanctuary Forest, the northern portion of the Study Area was previously logged (Stillwater Sciences 2021). In addition, disturbed openings are present along dirt access roads in the Study Area. Fuel break areas are located along ridgelines and portions of proposed treatment activities would be occurring on south-facing slopes based on the topographic data from the USGS. There are no recorded CNDDB occurrences of Humboldt County milk-vetch within five miles of the Study Area; however, there is one historic (1931) occurrence recorded in the online Jepson Herbaria (data provided by the Consortium of California Herbaria) mapped approximately five miles southwest of the Study Area. Marginal habitat in the Study Area for

North Coast semaphore grass, a perennial rhizomatous herb, includes the meadow in the southern portion of the Study Area. This species is known to occur in meadow openings in wet grassy, shady areas in North Coast coniferous forest. Generally, North Coast semaphore grass is found in meadows that are saturated during winter months. The meadow in the Study Area is predominantly exposed to full sun though the edges of the meadow may provide suitable shade to support this species. While this species is primarily known to occur in Marin, Sonoma and Mendocino Counties, there is one CNDDB record of North Coast semaphore grass in Humboldt County located over nine miles from the Study Area. Potential habitat for Humboldt County milk-vetch and North Coast semaphore grass in the project treatment area is unavoidable. Therefore, per SPR BIO-7, protocol-level surveys for special-status plants would be required to determine the presence or absence of the species in suitable habitat that could be affected by the treatment. Should these species be observed during protocol-level surveys, mitigation measure BIO-1a stipulates that a no-disturbance buffer would be established, generally a minimum of 50 feet, unless consultation with CDFW and USFWS determines treatment in the occupied habitat is reasonably expected to improve with treatment implementation. If buffers cannot be maintained during treatment activities and CDFW/USFWS do not determine occupied habitat is reasonably expected to improve with treatment implementation, Mitigation Measure BIO-1c stipulates a Compensatory Mitigation Plan would be developed to determine a compensatory mitigation strategy and how unavoidable losses of special-status plants would be compensated.

Howell's montia is an annual herb and **giant fawn lily, coast fawn lily, small groundcone, white-flowered rein orchid** and **Siskiyou checkerbloom** are all geophyte species that are not listed under CESA or ESA. Giant fawn lily (perennial herb), small groundcone (perennial rhizomatous herb [parasitic]), white-flowered rein orchid (perennial herb) and Siskiyou checkerbloom (perennial rhizomatous herb) are found in North Coast coniferous forest habitat. There are CNDDB occurrences within 1.5 miles of the Study Area for white-flowered rein orchid. A thick detritus layer was observed on the forest floor during the field survey which provides suitable habitat for white-flowered rein orchid. There are no CNDDB occurrences within five miles of the Study Area for giant fawn lily, small groundcone, and Siskiyou checkerbloom. However, roadcuts and openings in forest habitat, though limited, may provide suitable habitat for giant fawn lily, small groundcone and Siskiyou checkerbloom throughout the Study Area. Howell's montia (annual herb) and coast fawn lily (perennial bulbiferous herb) are known to occur in vernally wet/mesic sites in North Coast coniferous forest. One CNDDB occurrence for Howell's montia from 1923 is mapped approximately 0.75 mile south of the Study Area; the record indicates Howell's montia was observed on wet ground along an undisclosed creek. There are no known CNDDB occurrences of coast fawn lily within five miles of the Study Area. Suitable habitat for Howell's montia and coast fawn lily may be present along Vanauken Creek and associated tributaries. A standard minimum 50-foot buffer would be maintained along riparian habitat for all treatment activities except manual riparian thinning. Manual riparian thinning would include the use of hand tools and hand-operated power tools to cut, clear and/or prune trees, herbaceous vegetation and woody shrubs.

Per SPR BIO-7, non-listed geophyte and annual plant species would not require protocol-level surveys if treatment may be carried out during the dormant season for the species or when the species has completed its annual lifecycle, provided the treatment would 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. Treatment activities for the Project may occur during the non-dormant period (growth period), for these species; therefore, in accordance with SPR BIO-7, protocol-level surveys would also be required for in suitable habitat for Howell's montia, giant fawn lily, coast fawn lily, small groundcone, white-flowered rein orchid and Siskiyou checkerbloom. Should these species be observed during protocol-level surveys, Mitigation Measure BIO-1b stipulates that a no-disturbance buffer with be established, generally a minimum of 50 feet, unless treatments are

conducted during the dormant season for these species. If buffers cannot be maintained during treatment activities or treatment activities cannot be limited to the dormant season, Mitigation Measure BIO-1c stipulates a Compensatory Mitigation Plan would be developed to determine a compensatory mitigation strategy and how unavoidable losses of special-status plants would be compensated.

With the implementation of SPRs and MMs listed above, the Project would not substantially affect special-status plant species either directly or through habitat modifications. Consistent with the PEIR, impacts would be less than significant with mitigation.

Impact BIO-2

Treatment activities that have potential to alter the project area may result in direct or indirect adverse effects to special-status wildlife species. The potential for direct and indirect adverse effects to special-status wildlife species is within the scope of the activities and impacts addressed in the PEIR because the activities and level of disturbance as a result of implementing treatment activities are consistent with those analyzed in the PEIR. Impacts in the PEIR were analyzed by grouping wildlife species by life history characteristics including tree-nesting and cavity-nesting wildlife, shrub-nesting wildlife, ground-nesting wildlife, burrowing or denning wildlife, insects and other terrestrial invertebrates, bats, ungulates, fish and aquatic invertebrates, and amphibians and reptiles. While treatment activities may indirectly or directly impact special-status wildlife species, treatment activities would result in an overall healthier habitat and ecosystem. The following SPRs would be implemented to minimize impacts to special-status wildlife species: BIO-1 (conducting a data review and reconnaissance-level survey), BIO-2 (environmental resource training for all personnel), BIO-3 (protocol-level survey for sensitive natural communities and sensitive habitats), BIO-4 (riparian habitat treatments designed to avoid loss and/or degradation of riparian habitat), BIO-6 (prevent spread of plant pathogens), BIO-9 (preventing the spread of invasive species), BIO-10 (conduct focused or protocol-level surveys for special-status wildlife species or nursery sites), BIO-11 (installation of wildlife-friendly fencing around herbicide treatment areas), BIO-12 (protect common nesting birds, including raptors), GEO-1 (suspending all activities during rain events), GEO-3 (stabilizing soil disturbance), GEO-4 (monitoring for erosion and implementing erosion control), GEO-5 (draining stormwater via water breaks), and GEO-7 (minimizing erosion), HAZ-5 (prepare a Spill Prevention and Response Plan prior to herbicide treatment), HAZ-6 (coordinate pesticide use with applicable County Agricultural Commissioners), HYD-1 (comply with water quality regulations), HYD-4 (establish Watercourse and Lake Protection Zones), and HYD-5 (protect vegetation and special-status species from herbicides).

Literature and database reviews resulted in a list of 16 special status wildlife species known from the region. Based on results of reconnaissance-level surveys and habitat present within the project treatment areas, 11 of the 16 special-status wildlife species are known to be present or may be present in the project area, including foothill yellow-legged frog – north coast DPS, coho salmon – southern Oregon/northern California ESU, steelhead – northern California DPS summer-run, steelhead – northern California DPS winter-run, chinook salmon – California coastal ESU, northern spotted owl, monarch butterfly (migrating or breeding only), southern torrent salamander, red-bellied newt, northwestern pond turtle and Sonoma tree vole. In addition to the SPRs listed above, the following Mitigation Measures would be implemented to reduce to the potential for impacts to less than significant to special-status wildlife species: BIO-2a, BIO-2b, BIO-2c, BIO-2d, BIO-3a, BIO-3b and BIO-3c. Pursuant to Mitigation Measures BIO-2a to BIO-2d, loss of special-status wildlife species and functioning habitat would be avoided and, should loss be unavoidable, a Compensatory Mitigation Plan would be developed. Pursuant to MM BIO-3a, treatments would be designed to avoid loss of sensitive natural

communities including riparian habitat, and pursuant to MM BIO-3b and 3c, should loss be unavoidable, a Compensatory Mitigation Plan would be developed. Implementation of the SPRs and MMs listed above, impacts are expected to be less than significant. A detailed analysis of potential impacts to special-status wildlife species is included below.

Monarch Butterfly

Possible breeding and migrating habitat are present in the Study Area for monarch butterfly; however, overwintering habitat is not present. Winter roosts sites for the Western population of monarch butterfly extend along the coast from northern Mendocino County, California to Baja California, Mexico. Roosts are located in wind-protected tree groves of eucalyptus (*Eucalyptus* spp.), Monterey pine (*Pinus radiata),* or cypress (*Hesperocyparis* spp.). Monarch butterflies have potential to migrate through the project area, and adults may feed on nectar sources and mate while in the project area. If milkweed (*Asclepias* spp.) plants are present in the Project area, adults may lay eggs on the plants, with any emerging larvae feeding on the plants before undergoing metamorphosis to become an adult. Monarch butterflies are dependent on their host plants, milkweed, to breed; monarch butterflies lay their eggs on the milkweed plant which then becomes the food source for caterpillars once the eggs hatch. Narrow-leaf milkweed (*Asclepias fascicularis*) is native to the Humboldt area though additional milkweed species such as showy milkweed (*Asclepias speciosa*) which is native to California may occur in the Study Area. No milkweed species were observed during field observations; however, topography and dense vegetation restricted the crew from surveying the entire treatment area. Narrow-leaf milkweed is known to occur on dry ground in valley and foothill grassland; the meadow in the southern portion of the Study Area may provide suitable habitat. Showy milkweed is known to occur in a wide variety of habitats including fields, roadsides and riparian corridors though this species is generally found in depressions where water accumulates if annual precipitation is less than 9 inches (Stevens 2000). Suitable habitat for showy milkweed includes riparian corridors along Vanauken Creek and its tributaries, the meadow and along existing dirt access roads throughout the Study Area. The project area does not provide suitable overwintering habitat (i.e., wind-protected groves of eucalyptus, Monterey pine, or cypress) and the nearest known overwintering site is over 15 miles south, on the Mendocino County coast. Therefore, no impacts to monarch overwintering sites would occur. Impacts to individual monarch butterflies, if present, could occur, however implementation of SPRs and MMs listed above, in particular SPR BIO-2 (environmental resource training for all personnel), SPR BIO-10 (conduct focused or protocol-level surveys for special-status wildlife species or nursery sites), SPR HAZ-6 (coordinate pesticide use with applicable County Agricultural Commissioners), and SPR HYD-5 (protect vegetation and special-status species from herbicides), would reduce impacts to less-than-significant levels.

Amphibians

Foothill yellow-legged frog – north coast DPS is a California species of special concern known to be present in Vanauken Creek. A 2018 CNDDB occurrence mapped to Vanauken Creek intersects the Study Area; the record indicates one adult was photographed, but a 1200-meter survey reach along Vanauken Creek recorded numerous foothill yellow-legged frogs. Suitable dispersal and overwintering habitat is present in Vanauken Creek and associated tributaries of Vanauken and McKee Creeks. Due to dense tree canopy and lack of sun exposure, breeding habitat is not present in the Study Area. However, it is possible juvenile frogs may be present in the Study Area year-round. SPR BIO-10 stipulates if suitable habitat is identified in the project area for special-status wildlife species, a focused or protocol-level survey would be conducted. However, focus or protocol-level surveys are not required if the species presence is assumed. Treatment activities are not proposed to take place in state and federally

protected wetlands, or other aquatic habitats including streams. While a 50-foot buffer along all waterways would be maintained for most treatment activities, manual riparian thinning may occur within the buffer. Therefore, per Mitigation Measure BIO-2a, if the treatment activity must be implemented in occupied habitat and there is potential for this species to be present year-round, consultation with CDFW and/or USFWS would be required to determine if there is a period of time within which treatment could occur that would avoid mortality, injury, or disturbance of the species. Per MM BIO-2b, habitat function of foothill yellow-legged frog must also be maintained; if this is determined not to be feasible, MM BIO-2c would be implemented which dictates the creation of a Compensatory Mitigation Plan.

Suitable breeding and upland habitat is present in Vanauken Creek and its tributaries, and adjacent forest habitat for **red-bellied newt.** The nearest CNDDB occurrence from 1974 is mapped approximately 0.5 mile west of the project area to the intersection of Shelter Cove Road and Mattole River. Treatment activities are not proposed to take place in state and federally protected wetlands, or other aquatic habitats including streams; therefore, impacts to breeding habitat are not expected. This species is known to travel one mile or more from breeding habitat. During aestivation, which typically takes place during summer months, red-bellied newt is found underground within root channels. Rain events typically trigger migration to breeding habitats. (Thomas et al. 2016). While mechanical treatment activities would occur, mechanical treatment would be limited to cutting or chopping above-ground vegetation with the intent of keeping masticating heads out of duff layers and minimizing direct disturbance to subsurface soil layers, allowing intact root systems to resprout. Per SPR GEO-1, mechanical treatments would not occur during heavy precipitation. A focused or protocol-level survey would be conducted for red-bellied newt per SPR BIO-10. Mitigation Measures BIO-2b and BIO-2c would be implemented to ensure habitat function remains and mortality, injury or disturbance is avoided.

Southern torrent salamander is not expected to occur in the project area. This species is more commonly known to occur in high-gradient streams which are not present in the project area. Vanauken Creek and associated tributaries may provide marginal habitat for this species. Southern torrent salamanders typically remain in close proximity to aquatic habitat because they are very sensitive to desiccation. Riparian corridors are important foraging habitat for this species. (USFWS 2000). Treatment activities are not proposed to take place in state and federally protected wetlands, or other aquatic habitats including streams; however, manual riparian trimming may occur within 50 feet of waterways. Considering the lack of high-gradient streams present in the project area, it is unlikely this species would occur and impacts are not anticipated.

Reptiles

Northwestern pond turtle is known to occur in the Mattole River, located approximately 0.19 miles west of the project area. The nearest CNDDB occurrence from 2006 is mapped approximately 4.75 mile north of the project area to the Mattole River. While waterways within the project area are tributaries of Mattole River, field observations and aerial imagery determined suitable aquatic habitat is not present for this species due to dense tree canopy limiting suitable basking sites. However, the grassy meadow in the southern portion of the project area and adjacent forest habitat may provide suitable upland habitat for this species. Northwestern pond turtles are more commonly known to nest within 330 feet of suitable aquatic habitat, though they have been recorded traveling up to 0.25 miles from aquatic habitat to nest (USFWS 2023). This species is known to nest in open, sunny habitats such as annual grassland. In addition, this species is known to travel up to 0.31 miles to overwinter in shrubby/forested areas where a deep layer of duff or leaf litter is present (Western Pond Turtle Range-wide Conservation Coalition 2020). Pursuant to SPR-BIO-10, focused or protocol-level surveys would be

conducted for northwestern pond turtle. Upon completion of the survey, should this species be identified as present, MM BIO-2b stipulates additional protections such as no-disturbance buffers and limited operating periods would be implemented to avoid mortality, injury or disturbance and maintain habitat function for other (species not listed under CESA or ESA or California Fully Protected) special-status wildlife species. If provisions in SPR BIO-2b cannot be implemented, MM BIO-2c would be implemented which stipulates the creation of a Compensatory Mitigation Plan.

Fish

Coho salmon – southern Oregon/northern California ESU, steelhead – northern California DPS summer-run, and **steelhead – northern California DPS winter-run** are known to be present in the project area. These species are known to occur in Vanauken Creek. However, treatment activities are not proposed to take place in state and federally protected wetlands, or other aquatic habitats including streams. In accordance with SPR HYD-4, protection zones would be established for watercourses determined by the uses of the stream and presence of aquatic life. Protection zones would prohibit the use of heavy equipment, burn piles, fire ignition and servicing of equipment within the zone. While manual riparian trimming would occur within the protection zone, this treatment activity is not anticipated to impact aquatic habitat.

Chinook Salmon – California coastal ESU is not expected to occur in the project area. Essential Fish Habitat is mapped to the project area for chinook salmon – California coastal ESU. This species is not expected to occur due to a lack of suitable spawning and rearing habitat. Vanauken Creek is considered poor spawning habitat based on chinook salmon California coastal distribution 2005 NOAA data (NOAA 2005). While the Mattole River, located outside of the project area, is mapped as designated critical habitat for chinook salmon, Vanauken Creek is not. However, it is possible this species may occur near the confluence of the Mattole River and Vanauken Creek, especially during the winter when water flows are likely higher. The project area intersects Vanauken Creek approximately 0.2 mile west from the confluence of Mattole River and Vanauken Creek. Treatment activities are not proposed to take place in state and federally protected wetlands, or other aquatic habitats including streams. In accordance with SPR HYD-4, protection zones would be established for watercourses determined by the uses of the stream and presence of aquatic life. Protection zones would prohibit the use of heavy equipment, burn piles, fire ignition and servicing of equipment within the zone. While manual riparian trimming would occur within the protection zone, this treatment activity is not anticipated to impact aquatic habitat.

Birds

Northern spotted owl, a federally threatened species, is known to be present in the project area. There are two known nest locations, three activity centers and three positive occurrences mapped by CDFW Spotted Owl Observations Database within or in the immediate vicinity of the project area. While this species is generally associated with old-growth conifer forest habitat which was determined to not be present in the project area based on field observations, the nest occurrences record northern spotted owl nests found in Douglas fir and Pacific madrone trees. Mature Douglas fir, tanoak and Pacific madrone trees observed in the project area during the biological reconnaissance survey provide suitable nesting habitat for this species. In addition to breeding habitat, suitable roosting and foraging habitat is present throughout the project area. A few of the occurrences are mapped along ridges within the fuel break areas. In accordance with SPR BIO-10, either presence will be assumed or a protocol-level survey will be completed in accordance with the USFWS 2012 Protocol for Surveying Proposed Management Activities that may Impact Northern Spotted Owl (USFWS 2012). Pursuant to Mitigation Measure BIO-2a, habitat function must be maintained for northern spotted owl, and mortality, injury or disturbance must be avoided. Considering treatment activities would need to occur within occupied habitat, MM BIO-2a

stipulates that limited operating periods would be implemented. Per SPR BIO-10, habitat features necessary for survival would be identified and flagged for avoidance, and specific requirements for high canopy cover would be retained at the percentage preferred by the species. Should habitat function or mortality/injury/disturbance be determined to be unavoidable, Mitigation Measure BIO-2c stipulates the creation and implementation of a Compensatory Mitigation Plan.

Mammals

Suitable Douglas fir habitat is present in the project area for **Sonoma tree vole**. Sonoma tree vole spends the entirety of their lifecycle in the tree canopy. Sonoma tree vole feed almost exclusively on Douglas fir needles, using the discarded resin ducts from the needles to then create their nests. Douglas fir trees were observed throughout the project area during the biological reconnaissance survey. In accordance with SPR-BIO 10, a focused survey would be conducted for Sonoma tree vole. If this species is determined to be present, Mitigation Measure BIO-2b would be implemented to avoid mortality, injury or disturbance and maintain habitat function for Sonoma tree vole. If Mitigation Measure BIO-2b is determined to be insufficient to protect this species, a Compensatory Mitigation Plan would be created and implemented pursuant to MM BIO-2c.

Impact BIO-3

Initial and maintenance treatments include mechanical treatments and may include herbicide application, which could result in direct or indirect adverse effects to sensitive habitats, including designated sensitive natural communities. The potential for treatment activities to result in adverse effects to sensitive habitats was examined in the PEIR. The potential for adverse effects to sensitive habitats is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and level of disturbance as a result of the treatment activities are consistent with those analyzed in the PEIR. The SPRs that apply to this impact are BIO-1, BIO-2, BIO-3, BIO-4, BIO-6, BIO-9, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7, HAZ-5, HAZ-6 and HYD-4).

While CAL FIRE FRAP vegetation data maps coastal scrub habitat in the project area, aerial imagery and field observations indicates coastal scrub habitat is not present. In addition, CAL FIRE FRAP vegetation data maps montane-hardwood conifer as the dominant woodland habitat in the project area. However, based on field observations, Douglas fir and montane-hardwood habitat more accurately reflect the habitat present in the project area.

Natural communities identified in the project area are identified to alliance level using the online version of the Manual of California Vegetation (Sawyer et al. 2009; vegetation.cnps.org). The montane hardwood habitat in the project area conforms to the *Notholithocarpus densiflorus* Forest and Woodland Alliance under the Manual of California Vegetation (MCV) system which has a California Rarity Rank of S3; therefore, it is considered sensitive natural community by CDFW (CDFW 2025b). Pursuant to SPR BIO-3, a protocol-level survey would be conducted to identify, map and digitally record the limits of the sensitive natural community. Mitigation Measure BIO-3a stipulates that treatments must be designed to avoid loss of sensitive natural communities which includes limiting fuel break native vegetation relative cover removal and designing treatments to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function. Should significant impacts to sensitive natural communities be unavoidable, Mitigation Measure BIO-3b would be implemented to compensate for the unavoidable loss and create a Compensatory Mitigation Plan.

Annual grassland habitat in the project area conforms to *Lolium perenne* Herbaceous Semi-Natural Alliance, which does not have a rarity rank and is not considered a sensitive natural community. Douglas fir habitat in the project area conforms to the *Pseudotsuga menziesii* – (*Notholithocarpus densiflorus* – *Arbutus menziesii*) Forest and Woodland Alliance under the MCV system which has a California Rarity Rank of S4 and is therefore not considered a sensitive natural community by CDFW.

Riparian habitat is present in the project area and best conforms to *Alnus rubra* Forest Alliance and *Alnus rhombifolia* Forest and Woodland Alliance (Stillwater Sciences 2024). These alliances are not considered sensitive natural communities by CDFW. A 50-foot buffer would be maintained from the top of bank of the watercourse for all treatment activities except manual trimming. Pursuant to SPR BIO-4, treatments in riparian habitats would be designed to retain or improve habitat functions including retaining least 75 percent of the overstory and 50 percent of the understory and limiting treatment activities to the removal of uncharacteristic fuel loads. If impacts are significant following the implementation of SPR BIO-4, Mitigation Measure BIO-3c would be implemented to compensate for unavoidable loss of riparian habitat. A Compensatory Mitigation Plan would be created 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.

Additionally, based on the observed and documented mature diameter at breast height (DBH) ranges for tree species present during the site visit or known to occur within riparian forest habitat in the area, limiting tree removal to a maximum of 12 inches DBH for hardwoods and 14 inches DBH for conifers would not result in the removal of large trees. Large-diameter trees are generally defined as those greater than 20 inches DBH (Chishom et al., 2025). The table below summarizes the typical DBH ranges for each species at maturity.

Table BIO-2. Riparian Hardwood Tree Species and Mature DBH Ranges

Common Name	Scientific Name	Mature Tree dbh
Bigleaf Maple	*Acer macrophyllum*	12" to 36"
California laurel	*Umbellularia californica*	18" to 30"
Red alder	*Alnus rubra*	10" to 34"
White alder	*Alnus rhombifolia*	11" to 21"
Oregon ash*	*Fraxinus latifolia*	16" to 30"

* Hardwood species previously observed along Vanauken Creek but not observed during the 2025 site visit (Stillwater Sciences 2024).

Sources: Oregon State University 2025; U.S. Department of Agriculture

With the implementation of SPRs and MMs listed above, the Project would not substantially affect riparian habitat or other sensitive natural communities through direct loss or degradation. Impacts are consistent with those analyzed in the PEIR and would be less than significant.

Impact BIO-4

Impacts to designated wetlands do not apply to the Project because treatment activities would not occur in designated wetlands. Therefore, no impact is expected to occur to state- or federally- protected wetlands.

Impact BIO-5

Treatment activities include mechanical treatment which may result in direct or indirect adverse impacts to wildlife movement corridors or nurseries. The potential for treatment activities to result in adverse effects to wildlife movement corridors and nurseries was examined in the PEIR. The potential for adverse effects to wildlife movement corridors and nurseries is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and level of disturbance as a result of the treatment activities are consistent with those analyzed in the PEIR. The SPRs that apply to this impact are BIO-1, BIO-4, BIO-10, BIO-11 and HYD-4.

Land tenure of the project area is comprised of two conservation easements, the Sanctuary Forest and the Northcoast Regional Land Trust. Conservation easements are often used as a tool for land conservation including conserving wildlife corridors. The project area provides connectivity between the King Range National Conservation Area (managed by the Bureau of Land Management) and surrounding forest habitat; based on aerial imagery, there is approximately fifteen (15) miles of relatively continuous forest habitat from the Pacific Ocean and eastward. Riparian corridors along Vanauken Creek and McKee Creek and associated tributaries provide connectivity between the project area and the adjacent Mattole River. Additional Mitigation Measures that would reduce impacts to less than significant include MM BIO-5 which would identify nursery habitat and establish avoidance buffers.

With the implementation of SPRs and the MM listed above, the Project would not interfere substantially with wildlife movement corridors or impede use of nurseries. Impacts to wildlife movement corridors and nurseries are consistent with those analyzed in the PEIR and would be less than significant.

Impact BIO-6

Treatment activities including mechanical treatment and herbicide application, if used, may result in direct or indirect adverse impacts to the reduction of habitat or abundance of common wildlife including nesting birds. The potential for treatment activities to result in adverse effects to habitat and abundance of wildlife was addressed in the PEIR. The potential for adverse effects to common wildlife, including nesting birds, is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and level of disturbance are consistent with those analyzed in the PEIR. The SPRs that apply to this impact are BIO-1, BIO-2, BIO-3, BIO-4, BIO-12, and HYD-4. Additionally, MM BIO-5 is also applicable to the Project.

With implementation of the applicable SPRs and MM described above, the Project would not substantially reduce habitat or abundance of common wildlife. Impacts to habitat or abundance of common wildlife are consistent with those analyzed in the PEIR and would be less than significant.

Impact BIO-7

The potential for treatment activities to result in conflict with local policies or ordinances was examined in the PEIR. Pursuant to SPR AD-3 (consistency with local plans, policies, and ordinances), the project proponent must 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.

The project area is within the jurisdiction of Humboldt County. The project area is zoned under Timberland Production Zone. Additionally, many of the streams and creeks within the Project area are mapped as Streamside Management Areas. Relevant policies from the Land Use, and Conservation and Open Space, and Water Resources elements of the Humbolt County General Plan would be adhered to

pursuant to SPR AD-3. According to the Humboldt County General Plan FR-P20 Fire Safety Hazards, the County shall support programs for fuels reduction, dwelling fire protection and creation of defensible space for existing development (Humboldt County 2017).

Treatment activities would be conducted consistent with policies outlined in the Humboldt County General Plan and therefore there would be no impact.

Impact BIO-8

The project area is located outside of any habitat conservation plans (HCP) or natural community conservation plans (NCCP). Therefore, the Project would not conflict with any HCPs or NCCPs, and no impact would occur.

New Biological Resource Impacts

Treatment activities are consistent with treatment types and activities considered in the CalVTP PEIR. Biological resources that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape. Project-specific components of the Project were evaluated and analyzed in comparison with the CalVTP PEIR and the Project was determined to be consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (CalVTP Final PEIR, Volume II, Section 3.6.1 and 3.6.2) including land from outside the CalVTP treatable landscape. No new significant impacts would occur. Therefore, no new impact to biological resources would occur that is not covered in the PEIR.

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

The use of vehicles and mechanical equipment during initial treatment and treatment maintenance activities would result in the consumption of energy in the form of fossil fuels. The use of fossil fuels for equipment and vehicles was examined in the PEIR and found to be less than significant. The consumption of energy during implementation of the treatment project 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. Diesel and petroleum-based fuels, such as gasoline, would be consumed from the use of heavy-duty equipment and trucks, mechanical equipment, and the transport of personnel and equipment to and from and within the project site. The Project would support fire prevention and suppression. Wildfire response requires an immediate response from emergency personnel and mobilization of equipment from across the state and even across the nation, which often results in inefficient consumption of energy. Implementation of treatment activities would reduce wildfire risk and the intensity of fire responses.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing environmental and regulatory conditions are essentially the same within and outside the treatable landscape, and the types of treatment activities and associated use of energy are of the same scale and scope as analyzed in the PEIR; therefore, the energy impact is also the same. No SPRs are applicable to

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

New Energy Resource Impacts

The project proponent has considered the site-specific characteristics of the Project both inside and outside the treatable landscape and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (Sections 3.9.1, “Regulatory Setting” and 3.9.2, “Environmental Setting” in Volume II of the Final PEIR) since the added acreage would not expand the total annual acreage proposed for treatment under the PEIR of 250,000 acres per year. Therefore, the impacts of the Project are consistent with those considered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to energy resources would occur.

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	GEO-1 through GEO-8, AQ-3, AQ-4, 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, GEO-3, GEO-4, GEO-7, GEO-8, AQ-3	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

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

	Potentially Significant	**Less than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

The project area is located in Humboldt County within the Coast Ranges Geomorphic Province, which is characterized by northwest trending mountain ranges and valleys. The northern Coast Ranges are dominated by the Franciscan Complex (California Geological Survey, 2002). As discussed in the PEIR, the Franciscan complex consists of partially metamorphosed greenstone, basalt, chert, and graywacke that originated as sea floor sediments. Soils within the treatment areas are well drained and are dominated by Sproulish-Gibsoncreek-Redwohly complex, 50 to 75 percent slopes (75 percent), with the remainder composed of Redwohly-Gibsoncreek-Sproulish complex (13%), Sproulish-Telegraph-Redwohly complex (9%), Sproulish-Canoecreek-Redwohly complex (4%) and Gschwend-Frenchman complex (0%) (Natural Resource Conservation Service [NRCS], 2025).

The California Department of Conservation Landslide Inventory map was reviewed to identify unstable areas within or in proximity to the treatment areas. No historic or active landslides have been reported within the treatment areas (California Department of Conservation [CDOC] 2025). The erosion hazard

classifications for the dominant soils range from moderate to very severe, with approximately 84% of the project area classified as a very severe off-road, off-trail erosion hazard (NRCS 2025).

Impact GEO-1

The Project would include mechanical treatments, manual treatments, prescribed burning and may include herbicide application. These treatment activities would result in vegetation removal and soil disturbance, which has the potential to increase rates of erosion and loss of topsoil.

The potential for these treatment activities to result in substantial erosion or loss of topsoil was examined in the PEIR and found to be less than significant. The potential impacts are within the scope of the PEIR because the treatment activities are consistent with those analyzed in the PEIR. The implementation of the following SPRs would further minimize the risk of soil disturbance and loss of topsoil associated with treatment activities: SPR GEO-1, which requires the suspension of soil disturbing treatment activities during precipitation; SPR GEO-2, which limits high ground pressure vehicles that could cause soil disturbance or compaction on wet or saturated soils; SPR GEO-3, which requires stabilization of disturbed soil areas during treatment activities; SPR GEO-4, which requires inspection of the treatment area for proper erosion control measures prior to the rainy season and immediately following the first large rainfall event; SPR GEO-5, which requires stormwater to be drained via water breaks to decrease the potential for channelized erosion down linear treatment areas; SPR GEO-6, which minimizes the burn pile size to minimize the spatial extent of soil damage; SPR GEO-7, which minimizes erosion from use of heavy equipment and prescribed herbivory on slopes; SPR GEO-8, which will require a Registered Professional Forester (RPF) or licensed geologist to evaluate treatment areas with slopes greater than 50 percent for unstable areas and unstable soils (soil with moderate to high erosion hazard); SPR HYD-4, which requires establishment of Watercourse and Lake Protection Zones to reduce erosion near streams; SPR AQ-3, which requires preparation of a burn plan and minimization of soil burn severity to reduce the potential for runoff and soil erosion; and SPR AQ-4, which requires wetting of unpaved dirt roads to control dust.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the slopes and soil characteristics of the project area are essentially the same within and outside the treatable landscape and SPRs would be implemented as described above. Therefore, the potential impact related to soil erosion 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 GEO-2

The Project would include treatment activities that would result in the reduction of vegetative cover and affect root structure, decreasing the stability of slopes, which could increase the risk of landslides. The potential for treatment activities to increase the risk of landslides was examined in the PEIR and found to be less than significant. This impact is within the scope of the PEIR because the extent of vegetation removal, intensity of prescribed burning, and required avoidance of steep slopes and areas of instability are consistent with those analyzed in the PEIR. In addition, the implementation of SPRs GEO-1, GEO-3, GEO-4, GEO-7, GEO-8, and AQ-3 would minimize the potential for landslides from treatments.

New Geology, Soils, Paleontology, and Mineral Resource Impacts

The proposed treatments are consistent with the treatment types and activities evaluated in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatment

project and has determined they are consistent with the environmental and regulatory settings discussed in the PEIR. The project proponent has also determined that the inclusion of the portion of the project area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing environmental and regulatory conditions pertinent to geology and soils that are present within the treatable landscape are essentially the same as those areas outside the treatable landscape. Therefore, the impacts of the Project are also consistent with those covered in the PEIR. No changed circumstances would lead to new significant impacts not addressed in the PEIR. Therefore, no new impact to geology and soils would occur.

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	AD-3	NA	LTS	No	Yes
Impact GHG-2: Generate GHG Emissions through Treatment Activities	PSU	Impact GHG-2, pp. 3.8-11 – 3.8-17	Yes	AQ-3	GHG-2	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

Vegetation treatments would involve manual and mechanical vegetation removal, prescribed burning, and herbicide application, and biomass disposal would include chipping and pile burning, all of which would generate some GHG emissions. Consistency of treatments under the CalVTP with applicable plans, policies, and regulations aimed at reducing GHG emissions was examined in the PEIR and found to be less than significant. The Project would be consistent with the applicable policies, plans, and regulations to reduce GHG emissions as described in California's *2022 Climate Change Scoping Plan* (CARB 2022), the *California Forest Carbon Plan* (Forest Climate Action Team 2018), and the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* (CARB 2019). Because the Project is consistent with the latest Climate Change Scoping Plan measures, it is on target to achieve the legislated GHG emission target for 2030 and substantially advance toward the 2050 climate goals. It would also be consistent with the *Draft Humboldt County Regional Climate Action Plan* (Humboldt County 2024), which contains GHG reduction strategies and policies and details impacts of worsening wildfires on public health. Additionally, it would be consistent with the *Humboldt County General Plan*

(Humboldt County 2017), which contains goals and policies relating to fire protection and wildland fire prevention through the use of controlled burns, fuel removal, and fuel breaks.

Impacts related to GHG emissions from the project treatment activities are within the scope of the PEIR. The proposed activities, along with the associated equipment, duration of use, and resulting GHG emissions, are consistent with those analyzed in the PEIR. These impacts were found to be less than significant in the PEIR. SPRs applicable to Project include SPR AD-3, which requires the treatments to be consistent with local plans, policies, and ordinances. SPR GHG-1 is not applicable to the Project; the Project is not subject to the requirement to provide information to inform reporting under the Board of Forestry and Fire Protection's AB 1504 Carbon Inventory Process because this project is not a registered offset project. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The inclusion of 4 acres that are outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the same plans, policies, and regulations adopted to reduce GHG emissions apply in the areas outside the treatable landscape as in areas within the treatable landscape. Therefore, the GHG impact is also the same as described above.

Impact GHG-2

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

- MM GHG-2: Implement GHG Emission Reduction Techniques During Prescribed Burns

The inclusion of 4 acres that are located outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR, and the added acreage would not expand the total annual acreage of 250,000 acres per year proposed for treatment under the PEIR. However, GHG emissions and associated climate change impacts are global in nature and are not contained within the boundary of the treatable areas. Therefore, the GHG impact 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 Impacts Related to GHG Emissions

The proposed treatment is consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined that they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (Sections 3.8.1 and 3.8.2 in Volume II of the Final PEIR).

The inclusion of 4 acres that are located outside of the treatable landscapes constitutes a change to the geographic extent of the PEIR. However, the same plans, policies, and regulations adopted to reduce GHG emissions apply in the areas outside the treatable landscape as within it. Likewise, the climate conditions are the same within the treatable landscape as they are just outside of it for the Project. Therefore, impacts of the Project are also consistent with those covered in the PEIR. No changed circumstances are present, and since the added acreage would not expand the total annual acreage of 250,000 acres per year proposed for treatment under the PEIR, the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. No new impact related to GHG emissions would occur.

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	SPR HAZ-1, SPR HYD-4	NA	LTS	No	Yes
Impact HAZ-2: Create a Significant Health Hazard from the Use of Herbicides	LTS	Impact HAZ-2, pp. 3.10-15 – 3.10-18	Yes	SPR HAZ 5-9	NA	LTS	No	Yes
Impact HAZ-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites	PS	Impact HAZ-3, pp. 3.10-18 – 3.10-19	Yes	NA	HAZ-3	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 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

Project activities would require the use of various types of equipment and vehicles, which require the use of fuels, oils, and lubricants, which are hazardous materials. In addition, accelerants could be used to implement prescribed burns. The potential for treatment activities to cause a significant health hazard from the use of hazardous materials was analyzed in the PEIR and the impacts were found to be less than significant. This impact is within the scope of the PEIR because the types of treatments and associated equipment and types of hazardous materials that would be used are consistent with those analyzed in the PEIR. All equipment associated with the Project would comply with SPR HAZ-1, which ensures that equipment is properly maintained to minimize leaks.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the exposure potential, use of hazardous materials and regulatory setting are essentially the same within and outside of the treatable landscape; therefore, the impact would also be the same. The impact of the 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

While not currently planned, herbicide (spot treatment) may be used to treat resprouting and regrowth in fuel break areas, if needed. Herbicide application would involve transportation, use, storage, and disposal of herbicides, which could result in risks related to human exposure when applied in areas in close proximity to areas accessed by the public. Should herbicide treatments be used, ground-based methods would be used such as painting cut stems or stumps and using backpack sprayers or hand applicators to target specific invasive plants or resprouting hardwoods; no aerial spraying, broadcast spraying, or spraying from trucks would occur and no herbicide treatment would occur within 50 feet of aquatic habitat. The exact herbicide which may be used is not known at this time but would be selected to be consistent with those described in the CalVTP PEIR.

The potential for treatment activities to create a significant health hazard from the use of herbicides was analyzed in the PEIR and the impacts were found to be less than significant. The potential impacts related to the use of herbicides during treatment activities are within the scope of the activities and impacts discussed within the PEIR because the types of herbicides and application methods that would be used, are limited to ground-based applications, which are consistent with those analyzed in the PEIR.

Under the CalVTP, herbicide treatment application must comply with all EPA label directions as well as be applied by licensed applicators in compliance with all laws and regulations. The project would comply with SPR HAZ-5 through HAZ-9, which requires preparation of a Spill Prevention and Response Plan prior to any herbicide treatment activities to provide protection to workers, the public, and the environment from accidental spills or leaks of herbicides; compliance with herbicide application regulations to protect worker and public safety; triple rinsing herbicide containers and disposal of rinsed materials at an approved site and disposal of all herbicides following label requirements and waste disposal regulations; minimization of herbicide drift into public areas through application parameters such as limitations for nozzle pressure and nozzle distance from vegetation; and notification of herbicide application within 500 feet of public areas by posting signs at herbicide treatment areas.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the potential exposure to herbicides is essentially the same within and outside the treatable landscape. Therefore, the impact related to the potential for the Project to result in a significant health hazard from the use of herbicides is also the same. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HAZ-3

The Proposed Project would include treatments such as mechanical treatments and prescribed burning which could result in ground disturbance, which could expose workers, the public, or the environment to hazardous materials if a contaminated site is present within the project area. Additionally, prescribed burning activities could lead to unexpected ignitions if ignitable hazardous waste were present, which could expose workers to risks associated with unexpected fire or explosions. The potential for the

treatment activities to encounter contaminated sites that could expose workers, the public, or the environment to hazardous materials was examined in the PEIR and was identified as potentially significant. This impact was identified as potentially significant in the PEIR because hazardous materials sites could be present within treatment sites, and soil disturbance or burning in those areas could expose people or the environment to hazards. In evaluating the potential for effects related to the proposed project, database searches for hazardous materials sites within the project area were conducted as directed by MM HAZ-3 (California Department of Toxic Substances Control [DTSC] 2025a, 2025b, 2025c; State Water Resources Control Board [SWRCB] 2025a, 2025b; California Environmental Protection Agency [CalEPA], 2025a, 2025b).

- MM HAZ-3: Identify and Avoid Known Hazardous Waste Sites

According to this database search, there are no hazardous materials sites located within the project area. One leaking underground storage tank site, CDF Thorn Forest Fire Station (T0602300001) is located within 0.25 mile of the treatment area; however, cleanup has been completed and closed as of 2007 (SWRCB, 2025c). The only listed hazardous materials sites located within the treatment areas have been cleaned up and the cases closed. In addition, the Project would not involve ground disturbance outside of the project area that would have the potential to disturb contaminated sites. Therefore, this impact is less than significant.

New Hazardous Materials, Public Health and Safety Impacts

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the potential to encounter hazardous materials and the regulatory conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape. Therefore, the hazardous materials impact related to exposing the public or environment to hazards from disturbance of known hazardous material sites is also the same. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

HYDROLOGY AND WATER QUALITY

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact HYD-1: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Prescribed Burning	LTS	Impact HYD-1, pp. 3.11-25 – 3.11-27	Yes	AQ-3, GEO-3, GEO-4, GEO-5, GEO-6, GEO-7, HAZ-1, HYD-1, HYD-2, HYD-4, HYD-6	NA	LTS	No	Yes
Impact HYD-2: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the Implementation of Manual or Mechanical Treatment Activities	LTS	Impact HYD-2, pp. 3.11-27 – 3.11-29	Yes	GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-6, GEO-7, GEO-8, HAZ-1, HYD-1, HYD-2, HYD-4, HYD-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. 3.11-29	No	N/A	NA	LTS	No	Yes
Impact HYD-4: Violate Water Quality Standards or Waste Discharge Requirements, Substantially Degrade Surface or Ground Water Quality, or Conflict with or Obstruct the Implementation of a Water Quality Control Plan Through the	LTS	Impact HYD-4, pp. 3.11-30 – 3.11-31	Yes	GEO-1, GEO-7, HAZ-1, HAZ-5, HAZ-7, HYD-1, HYD-2, HYD-3, HYD-4, HYD-5, HYD-6	NA	LTS	No	Yes

Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Ground Application of Herbicides								
Impact HYD-5: Substantially Alter the Existing Drainage Pattern of a Treatment Site or Area	LTS	Impact HYD-5, p. 3.11-31	Yes	AQ-3, BIO-4, GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-6, GEO-7, GEO-8, HYD-1, HYD-2, HYD-4, HYD-6	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

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

	Potentially Significant	**Less than Significant with Mitigation Incorporated**	**Less than Significant**
[identify new impact here, if applicable; add rows as needed]	☐	☐	☐

Discussion

The project area is within the jurisdiction of the North Coast Regional Water Quality Control Board (RWQCB). It lies within the Cape Mendocino Hydrologic Unit (HU) and Mattole River Hydrologic Area (HA) (North Coast RWQCB 2018). Water bodies in the project vicinity include Vanauken Creek, McKee Creek, and the Mattole River. The Mattole River Watershed is listed as impaired for sediment and temperature, and it is subject to a Total Maximum Daily Load (TMDL) (State Water Resources Control Board [SWRCB] 2024). The project area is roughly 6.25 miles inland from the coast and experiences very high levels of precipitation (88 inches), particularly during November to April (NOAA 2025). Vanauken Creek, specifically, is tributary to the Mattole River (CDFW n.d.). It drains a watershed of approximately 1.7 square miles with elevations ranging from about 940 feet at the creek mouth to 1,600 feet in the headwater areas. Summer base flow is approximately 0.5 cubic feet per second (cfs) at the mouth, but over 10 cfs is not unusual during winter storms (CDFW No Date). No mapped groundwater basins underlie the project area (DWR 2025).

Impact HYD-1

The Project would include prescribed burning (broadcast and pile). The potential impacts of these activities to water quality are described in the CalVTP PEIR (2019). Principally, this includes post-fire erosion and runoff changes, which can carry sediment and other pollutants to surface water bodies. Additionally, use of diesel- and gasoline-powered equipment during burn activities could result in the leaking of hazardous materials if equipment is not properly maintained. The PEIR identified the potential for prescribed burning treatments to violate water quality standards or waste discharge requirements, degrade surface or groundwater quality, or conflict with the implementation of a water quality control plan and concluded that implementation of SPRs would reduce these potential impacts to a less-than-significant level. Specifically, SPR AQ-3 would require creation of a burn plan, which would include modeling of fire behavior and minimization of soil burn severity, such as to reduce the potential for runoff and erosion. SPR GEO-3 through SPR GEO-7 would require stabilization of bare soil (e.g., with mulch) created through prescribed burns; inspection and remediation of erosion control measures; draining of compacted and/or bare linear treatment areas via water breaks; minimization of burn pile size; and restricting use of equipment and vehicles on steep slopes. SPR HAZ-1 requires that equipment used in support of prescribed burning is maintained per manufacturer's specifications. Finally, SPRs HYD-1, HYD-2, HYD-4, and HYD-6 require compliance with applicable waste discharge requirements (WDRs)[5]; avoidance of constructing new roads; identification and protection of Watercourse and Lake Protection Zones (WLPZs), and protection of existing drainage systems. Project-specific impacts related to hydrology and water quality are within the scope of the PEIR, as the proposed treatment activities are consistent with those analyzed in the program-level document. Therefore, implementation of these SPRs would avoid or minimize the adverse water quality effects of prescribed burning under the Project; thus, the impact would be less than significant.

As shown in Figure 3, only a small area (approximately 4 acres) is proposed for treatment that is outside of the treatable landscape. This area is similar in nature to the remainder of the project area (i.e., conifer forest, undeveloped) and does not include substantial additional water bodies or water resources that could be affected by prescribed burning activities. The SPRs described above would avoid or minimize impacts outside of the treatable landscape. Therefore, the proposed activities would not constitute a more severe significant impact than that analyzed and addressed in the PEIR.

Impact HYD-2

The Project would include mechanical and manual treatment activities. As described in the PEIR (2019), mechanical treatment activities would have potential to result in adverse effects on hydrology and water quality. This would include erosion and sedimentation (e.g., due to operation of heavy equipment on steep slopes) as well as releases of hazardous materials (e.g., fuel, oil, etc.) contained in diesel- and gasoline-powered equipment. The PEIR identified the potential for manual or mechanical treatments to violate water quality standards or waste discharge requirements, degrade surface or groundwater quality, or conflict with the implementation of a water quality control plan and concluded that implementation of SPRs would reduce these potential impacts to a less-than-significant level. Specifically, SPR GEO-1 through GEO-8 would require suspension of ground disturbance during heavy precipitation events; limiting use of heavy equipment soils are wet and saturated; stabilization of disturbed soil areas (e.g., with mulch); inspection and remediation of erosion control measures; draining

[5] This could include the North Coast RWQCB's General WDRs for Discharges Related to Timber Harvest Activities on Non-Federal Lands in the North Coast Region (Order No. R-1-2004-0030).

of compacted and/or bare linear treatment areas via water breaks; minimizing pile burn size; limiting use of heavy equipment on slopes, to reduce potential erosion; and evaluation of steep slopes proposed for treatment to avoid or reduce erosion. SPR HAZ-1 would require proper maintenance of diesel- and gasoline-powered equipment, while SPRs HYD-1, HYD-2, HYD-4, and HYD-6, would require compliance with applicable WDRs; avoidance of constructing new roads; identification and protection of Watercourse and Lake Protection Zones (WLPZs), and protection of existing drainage systems. The proposed treatment activities are consistent with the evaluation in the PEIR, and implementation of these SPRs would or minimize the adverse water quality effects of mechanical and manual treatment under the proposed project. Thus, impacts would be less than significant.

As noted above, only a small area (approximately 4 acres) is proposed for treatment that is outside of the CalVTP treatable landscape. This area is similar in nature to the remainder of the project area (i.e., conifer forest, undeveloped) and does not include substantial additional water bodies or water resources that could be affected by manual or mechanical treatment activities. The SPRs described above would avoid or minimize impacts outside of the treatable landscape. Therefore, the proposed activities would not constitute a more severe significant impact than that analyzed and addressed in the PEIR.

Impact HYD-3

The Project would not include prescribed herbivory as a treatment activity. Therefore, no impacts would occur under this impact criterion.

Impact HYD-4

While herbicide application is not anticipated at this time, it could potentially be used to prevent the regrowth of nonnatives specie and resprouting hardwoods, as described in Section II, “Project Description.” Generally, on-the-ground application methods would include painting cut stems or stumps and using backpack sprayers or hand applicators to target specific invasive plants; no aerial spraying, broadcast spraying, spraying from trucks would occur under the Project. The potential effects of herbicides on water quality are described in the PEIR (2019) and these generally include off-site movement of herbicides from runoff, leaching, drift, and misapplication or spills. Water quality impacts can also occur due to erosion and sedimentation caused by heavy equipment that may be used during herbicide applications. The PEIR identified the potential for herbicide application to violate water quality standards or waste discharge requirements, degrade surface or groundwater quality, or conflict with the implementation of a water quality control plan and concluded that implementation of SPRs would reduce these potential impacts to a less-than-significant level. This includes SPR GEO-1 and GEO-7, which would require suspension of ground disturbance (e.g., from mechanical equipment) during heavy precipitation, and limitations on the use of heavy equipment on slopes. SPRs HAZ-1, HAZ-5, and HAZ-7 would require that diesel- and gasoline-powered equipment is properly maintained per manufacturer’s specifications; a Spill Prevention and Response Plan (SPRP) is prepared prior to beginning herbicide treatment activities; and that herbicide and adjuvant containers are triple-rinsed at approved sites and properly disposed. Finally, SPRs HYD-1, HYD-2, HYD-4, and HYD-6, would require compliance with applicable WDRs; avoidance of constructing new roads; identification and protection of WLPZs, and protection of existing drainage systems. Project-specific impacts related to hydrology and water quality are within the scope of the PEIR, as the proposed treatment activities are consistent with those analyzed in the program-level document. Therefore, implementation of these SPRs would or minimize the adverse water quality effects of potential herbicide application under the proposed project. Impacts would be less than significant.

As noted above, only a small area (approximately 4 acres) is proposed for treatment that is outside of the CalVTP treatable landscape. This area is similar in nature to the remainder of the project area (i.e., conifer forest, undeveloped) and does not include substantial additional water bodies or water resources that could be affected by herbicide application. The SPRs described above would avoid or minimize impacts outside of the treatable landscape. Therefore, the proposed activities would not constitute a more severe significant impact than that analyzed and addressed in the PEIR.

Impact HYD-5

The Project would include ground-disturbing activities that would have potential to alter existing drainage patterns. As described in the CalVTP PEIR (2019), non-shaded fuel breaks have the greatest potential for adverse effects related to alteration of drainage patterns. The PEIR identified the potential for treatments to substantially alter the existing drainage pattern of a treatment site or area and concluded that implementation of SPRs would reduce these potential impacts to a less-than-significant level. However, the Project would only include shaded fuel breaks (retaining a thinned canopy layer) and thus the potential for impacts would be reduced compared to those evaluated under the PEIR. Moreover, implementation of SPRs would avoid or minimize potential impacts associated with the proposed activities (including prescribed burning, mechanical and manual treatment, and potentially herbicide applications). As noted above, SPR AQ-3 would require creation of a burn plan to reduce potential for runoff and erosion. SPR BIO-4 would design treatments to avoid loss or degradation of riparian habitat, including limiting ground disturbance in riparian areas. SPRs GEO-1 through GEO-8 would require suspension of ground disturbance during heavy precipitation events; limiting use of heavy equipment when soils are wet and saturated; stabilization of disturbed soil areas (e.g., with mulch); inspection and remediation of erosion control measures; draining of compacted and/or bare linear treatment areas via water breaks; minimizing pile burn size; limiting use of heavy equipment on slopes; and evaluation of steep slopes proposed for treatment to avoid or reduce erosion. SPRs HYD-1, HYD-2, HYD-4, and HYD-6 would require compliance with applicable WDRs; avoidance of constructing new roads; identification and protection of Watercourse and Lake Protection Zones (WLPZs), and protection of existing drainage systems. With implementation of these SPRs, impacts would be less than significant.

As discussed above, the small area (approximately 4 acres) proposed for treatment that is outside of the treatable landscape is similar in nature to the remainder of the project area (i.e., conifer forest, undeveloped) and does not include substantial additional water bodies or water resources that could be affected by the proposed activities. The SPRs described above would avoid or minimize impacts outside of the CalVTP treatable landscape. Therefore, the proposed activities would not constitute a more severe significant impact than that analyzed and addressed in the PEIR.

New Hydrology and Water Quality Impacts

The project treatments are consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatment project and determined they are consistent with the applicable environmental and regulatory conditions presented in the PEIR (refer to Sections 3.11.1 and 3.12 in Volume II of the Final PEIR). Including land from outside the CalVTP treatable landscape in the project area constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental and regulatory conditions pertinent to hydrology and water quality in the areas outside the treatable landscape are essentially the same as those within the treatable landscape; therefore, the impacts of the Project are also consistent with those covered in the PEIR. No changed circumstances are

present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to hydrology and water quality would occur.

LAND USE AND PLANNING, POPULATION AND HOUSING

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact LU-1: Cause a Significant Environmental Impact Due to a Conflict with a Land Use Plan, Policy, or Regulation	LTS	Impact LU-1, pp. 3.12-13 – 3.12-14	Yes	AD-3	N/A	LTS	No	Yes
Impact LU-2: Induce Substantial Unplanned Population Growth	LTS	Impact LU-2, pp. 3.12-14 – 3.12-15	Yes	N/A	N/A	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

All project treatments and treatment maintenance activities would take place on public and private lands surrounding the community of Whitethorn in southern Humboldt County. SPR AD-3 (Consistency with Local Plans, Policies, and Ordinances) requires that the project proponent design and implement the treatment in a manner that is consistent with applicable local plans (e.g., general plans), policies, and ordinances to the extent the Project is subject to them. As described in "Biological Resources," the Project would be consistent with local policies protecting biological resources. As described in "Noise," treatment activities would occur consistent with the local ordinances of Humboldt County.

Land use types within the treatment area are classified as Timberland, Residential Agriculture, Public Facility, and Vacant. The zoning designations present within the area include Timberland Production Zone, Unclassified, and Agriculture Exclusive (Humboldt County 2025b). The potential for treatment activities to cause a significant environmental impact due to the conflict with a land use plan, policy, or regulation was evaluated in the PEIR and was found to be less than significant. The potential for

vegetation treatment activities to cause a significant environmental impact is within the scope of the PEIR because the treatment types and activities are consistent with those evaluated in the PEIR. SPR AD-3 is applicable to the Project, and it requires project treatments to be consistent with local plans, policies, and ordinances.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent considered in the PEIR. However, because the land uses in the project area are generally the same within and outside the treatable landscape, the land use impact is also the same. No conflict would occur because the project proponent would adhere to SPR AD-3. This determination is consistent with the PEIR and would not constitute a more severe impact than that which is described in the PEIR.

Impact LU-2

The PEIR evaluated the potential for initial treatments and maintenance treatments to result in substantial population growth as a result of increases in demand for employees, which was found to be less than significant. Impacts associated with a short-term increase in the demand for workers during implementation of the treatment project are within the scope of the PEIR because the number of workers required for the Project is consistent with the crew size analyzed in the PEIR for the types of treatments proposed. Additionally, as evaluated in the PEIR, the workforce needed for project treatments and maintenance can largely be met by hiring local residents near the treatment areas. While some employees may relocate to meet workforce demands, adequate housing is expected to be available to accommodate those who move from outside the region.

The inclusion of land in the project treatment area that is outside the CalVTP treatable landscape is considered a change to the geographic extent presented in the PEIR. However, because the population and housing characteristics of the project area are basically the same within and outside the treatable landscape, the population and housing impact is also the same, as described above. There are no SPRs applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than that which was evaluated in the PEIR.

New Land Use and Planning, Population and Housing Impacts

The Proposed Project is consistent with the treatment types and activities described in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the Proposed Project and determined they are consistent with the applicable environmental and regulatory conditions described in the CalVTP PEIR (refer to Sections 3.12.1, “Environmental Setting” and 3.12.2, “Regulatory Setting” in Volume II of the Final PEIR). The project proponent has also determined that including land in the proposed treatment area that is outside the treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the project area boundary, the existing conditions relevant to land use and planning, population, and housing that are present in the areas outside the treatable landscape are very similar to those within the treatable landscape; therefore, the impacts of the proposed project are also consistent with those disclosed in the PEIR. No changed circumstances are present and the inclusion of lands outside the CalVTP treatable landscape would not result in any new significant impacts. In conclusion, no new impact related to land use and planning, population, and housing would occur.

NOISE

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact NOI-1: Result in a Substantial Short-Term Increase in Exterior Ambient Noise Levels During Treatment Implementation	LTS	Impact NOI-1, pp. 3.13-9 – 3.13-12; Appendix NOI-1	Yes	AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, NOI-6	NA	LTS	No	Yes
Impact NOI-2: Result in a Substantial Short-Term Increase in Truck-Generated SENL's During Treatment Activities	LTS	Impact NOI-2, p. 3.13-12	Yes	AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, NOI-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 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

Impact NOI-1

The project treatment activities that have the potential to create a short-term increase in the ambient noise level include prescribed burning, manual treatments, and ground-based mechanical treatments. Specifically, prescribed burning activities for the Project may involve bulldozers to create control lines and a helicopter with a helitorch for ignition, while manual treatments would use hand-operated power tools, and mechanical treatments could include equipment such as bucket trucks, tow chippers, track chippers, fire engines, and riding lawn mowers. Prescribed burning, manual, and mechanical treatments would occur on weekdays during daylight hours only. When work is conducted within a jurisdiction with more restrictive noise ordinance, treatments would be conducted within the allowable hours for noise-generating activities. Multiple crews may be working at the same time and conducting prescribed burns, as well as using mechanical and manual methods that may generate varying noise levels, temporarily increasing ambient noise in the vicinity. Although the Project is situated in a rural area, private

residences and other noise-sensitive land uses may still be located near the project site and treatment activities and could be temporarily exposed to elevated noise levels. The Project is located within unincorporated Humboldt County and would be consistent with applicable County noise ordinances (Humboldt, 2025b). The potential for treatment activities to cause substantial short-term increases in the exterior ambient noise level was addressed in the PEIR and was found to be less than significant. This impact is within the scope of the PEIR because the types of treatments and associated equipment, and thus the noise generated, are consistent with those analyzed in the PEIR. SPRs applicable to the proposed project include AD-3, which requires the treatments to be consistent with local plans, policies, and ordinances. As described in the project description, all treatments would occur primarily on weekdays during daylight hours only. Noise-generating treatments would be within the Humboldt County construction noise requirements, which state that construction activities should occur during normal work hours and non-noise-sensitive times of day. Table N-S7 of the Humboldt County General Plan (Humboldt County 2017) summarizes the noise ordinances applicable to the Project. Noise-generating treatments would comply with the local regulations outlined in Table N-S7 of the Humboldt County General Plan, and therefore all work would be within the allowable limits in accordance with SPR AD-3.

Additional SPRs applicable to the Project include NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6, which would require that heavy equipment be used only during daytime hours, all equipment be properly maintained, engine shrouds be closed during mechanical equipment operation and idle time be restricted to 5 minutes, all staging areas be placed away from noise sensitive land types, and any noise sensitive receptors be notified ahead of work. As identified in the PEIR, the implementation of these SPRs would minimize impacts to ambient noise levels from equipment used during prescribed burning and manual or mechanical treatments—such as bulldozers, helicopters, hand-powered tools, bucket trucks, tow chippers, track chippers, fire engines, and riding lawn mowers—ensuring that noise-related effects remain less than significant.

The inclusion of the 4 acres that are located outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. However, the added acreage would not expand the total annual acreage of 250,000 acres per year proposed for treatment under the PEIR, and the proposed treatments within and outside of the treatable landscape are the same as analyzed in the PEIR. The environmental conditions outside the treatable landscape are essentially the same as those within it, as both areas are subject to the same noise ordinances and share comparable noise-sensitive receptors. Therefore, the noise impact 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 NOI-2

Project treatment activities would require large trucks to haul equipment and crews to the project site. While trucks would pass residential sensitive receptors, it is not anticipated that project traffic would result in a substantial increase in truck-generated noise along local roads. These large trucks have the potential for a substantial short-term increase in single-event noise levels (SENLs), but would only be in use during daytime hours, generally Monday through Friday, and in compliance with other more stringent local noise ordinances (see Impact NOI-1). The impacts are within the scope of the PEIR because the treatment activities and methods are the same as those analyzed in the PEIR. SPRs applicable to this treatment are AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6, described under Impact NOI-1. The potential for a substantial short-term increase in SENL during the project treatments

was evaluated in the PEIR and was found to be less than significant with the implementation of these SPRs.

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

New Noise Impacts

The proposed treatment is consistent with the treatment types and activities discussed in the PEIR. The site-specific characteristics of the proposed treatments are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (Sections 3.13.1 and 3.13.2 in Volume II of the Final PEIR).

The inclusion of the four acres that are located outside the CalVTP treatable landscape in the proposed treatment area constitutes a change to the geographic extent presented in the PEIR. However, the existing environmental and regulatory conditions pertinent to noise that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as previously described. Therefore, the impacts are the same and for the reasons described above, impacts of the proposed treatment project are consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not create any new significant impact beyond what was addressed in the PEIR. No new impact related to noise or the noise environment that is not covered in the PEIR would occur. Therefore, no new impact related to noise would occur.

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	REC-1; 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 treatment areas are located on the Sanctuary Forest Incorporation and the Northcoast Regional Land Trust conservation easements. The Northcoast Regional Land Trust's easement is not open for public access. The Sanctuary Forest's easement is open to public access with opportunities for guided recreation use as well as volunteer opportunities on restoration projects located within or adjacent to the project areas. In addition, project treatment areas are located approximately 0.8-1.7 miles from recreational areas owned by the Bureau of Land Management, California State Parks, and other federal lands. Briceland Road, located along the north and west border of the project areas, provides access to these federal and state recreational areas. The potential for vegetation treatment and maintenance activities to directly or indirectly impact recreational activities was evaluated in the PEIR (CalVTP Final PEIR, Volume II, 3.1-6, 3.14-7). The potential for vegetation treatment and maintenance activities to cause a significant environmental impact is within the scope of the PEIR because the treatment types and activities are consistent with those evaluated in the PEIR. SPR AD-3 requires project vegetation treatment and maintenance activities to be consistent with local plans, policies and ordinances, and SPR REC-1 requires notifications to be posted at least two weeks prior to the commencement of treatment activities if temporary closures are required. SPR REC-1 also requires project proponents to provide notification of the treatment activity to any official responsible for

distributing public information. With the implementation of SPR AD-3 and SPR REC-1, impacts to recreational activities would be less than significant. Additional indirect impacts to recreation such as decreased air quality, traffic, and degradation of scenic resources are evaluated in the "Aesthetics," "Air Quality," and "Transportation" sections of the PEIR (CalVTP Final PEIR, Volume II, 3.2, 3.4, 3.15).

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic treatment area presented in the PEIR. However, recreational uses in the area outside the CalVTP treatable landscape are the same as those within the treatable landscape. The area outside the treatable landscape is directly adjacent to the proposed treatment area and is part of the Northcoast Regional Land Trust conservation easement. The proposed treatment activities would have the same recreational resource impacts as previously discussed. Implementation of SPR AD-3 and REC-1 would minimize disturbance to recreational activities within and in the vicinity of the project treatment areas. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

New Recreation Impacts

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

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, recreational uses in the area outside the treatable landscape are the same as those within the treatable landscape. The area outside the treatable landscape is directly adjacent to the proposed treatment area. The proposed treatment activities would have the same recreational resource impacts as discussed above. Implementation of SPR AD-3 and SPR REC-1 would minimize disturbance to recreational activities within and in the vicinity of the project area, therefore, impacts would be less than significant.

TRANSPORTATION

Impact in the PEIR	Project-Specific Checklist

Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact TRAN-1: Result in Temporary Traffic Operations Impacts by Conflicting with a Program, Plan, Ordinance, or Policy Addressing Roadway Facilities or Prolonged Road Closures	LTS	Section 3.15.2; Impact TRAN-1 pp. 3.15-9 – 3.15-10	Yes	AD-3, TRAN-1	NA	LTS	No	Yes
Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses	LTS	Impact TRAN-2 pp. 3.15-10 – 3.15-11	Yes	AD-3, TRAN-1	NA	LTS	No	Yes
Impact TRAN-3: Result in a Net Increase in VMT for the Proposed CalVTP	PSU	Impact TRAN-3 pp. 3.15-11 – 3.15-13	Yes	NA	NA	PSU	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

New 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

The Project would require the use of public roadways to access existing fire roads and trails leading to the specific treatment areas and would temporarily increase vehicular traffic due to hauling equipment and crew transportation. Project-related traffic would include heavy-vehicle trips to haul equipment and materials and worker commute trips to and from the treatment areas. Crew sizes would vary but would typically be fewer than 25 workers per site, per day, however multiple crews may work at the same

time. No road closures would be necessary for the implementation of the Project. The potential for a temporary increase in vehicle traffic associated with the proposed project work to conflict with a program, plan, ordinance, or policy addressing roadway facilities, or for prolonged road closures, was examined in the PEIR and found to be less than significant. The proposed temporary increases in traffic related to the Project is within the scope of the PEIR because the treatment duration and limited number of vehicles associated with the proposed treatments are consistent with those analyzed in the PEIR. The proposed treatments would not all occur concurrently and increases in vehicle trips associated with the treatments would be dispersed on multiple roadways depending on the particular access location. Implementing SPR AD-3 requires the treatments to be consistent with local plans, policies, and ordinances. Additionally, SPR TRAN-1 would require that the project proponent implement a traffic management plan (TMP) and that traffic control measures be placed on affected roadways during project treatment activities, should those activities result in obstructions, delays or hazards exceeding applicable jurisdictional standards. This would work to minimize potential traffic obstructions, hazards, and service level degradation along affected roadway facilities, including any evacuation routes.

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

Impact TRAN-2

Project activities would not involve the construction or alteration of any roadways. However, proposed treatments include burning which due to the smoke produced has the potential to temporarily affect visibility on nearby roadways and therefore increase transportation hazards. Furthermore, the proposed treatments could require the transportation of heavy equipment along narrow or steep roadways, which could create increased transportation hazards due to incompatible uses. The potential for increased hazards along roadways during implementation of the treatment project was examined in the PEIR.

SPRs applicable to this treatment are AD-3 and TRAN-1, described above under Impact TRAN-1. Under SPR TRAN-1, the project proponent would prepare and implement a TMP to avoid and minimize temporary transportation impacts. Direct and indirect smoke impacts related to roadway visibility driver distraction would also be considered during this process. Therefore, the project treatment activities would not substantially increase hazards due to a design feature or incompatible uses, and impacts would be less than significant. This impact is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR because the activity type and duration are consistent with those analyzed in the PEIR.

The project area includes land that is outside the CalVTP treatable landscape. While this constitutes a change to the geographic area considered in the PEIR, the existing environmental conditions for the land outside the treatable landscape and on the land inside the treatable landscape are essentially the same. The existing transportation conditions (e.g., roadways, road use) present in the areas outside the CalVTP treatable landscape are essentially the same as those within the treatable landscape because they continue beyond the treatable landscape. Therefore, the potential to increase hazards is the same for project areas outside the CalVTP treatable landscape as for areas within the treatable landscape. As a

result, the impact to increased hazards is also the same and within the scope of the PEIR. The Project would result in a less-than-significant impact related to increasing road hazards and would not result in a more significant impact than covered in the PEIR.

Impact TRAN-3

The project treatments could temporarily increase vehicle miles traveled (VMT) above baseline conditions because the project access locations are in semi-remote locations along fire roads and other small, local roadways. Therefore, vehicle trips would be required to access the treatment areas which would increase the total VMT in the area.

The number of truck trips and worker vehicle trips to and from the project area would vary based on the size of the area being treated and the type of treatment being implemented. 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 stated in Impact TRAN-3 of the PEIR and described in the *Technical Advisory on Evaluating Transportation Impacts* published by the Governor's Office of Planning and Research (Governor's Office of Planning and Research 2018), individual projects under the CalVTP that are likely to generate fewer than 110 trips per day are expected to cause a less-than-significant transportation impact for specific later activities. As presented in the PEIR, this amount would allow for up to 55 vehicles hauling materials and bringing crew and equipment to and from the project site in a single day. Because of the small sizes of the crews needed for the proposed project, the limited equipment needed, and the limited materials to be hauled in any one day, it is not expected that VMT would typically exceed 110 trips per day; however, it is possible multiple crews would be out at the same time. Additionally, as identified under Impact AQ-1, Humboldt County would implement MM AQ-1 to the extent feasible to reduce exhaust emissions impacts from on- and off-road vehicles. While carpooling would be encouraged under Mitigation Measure AQ-1, crew sizes would be small and may not all be employed with the same company and would therefore not be a feasible option in all cases.

Based on this, the potential for the Project to result in a net increase in VMT would remain potentially significant and unavoidable, as stated in the PEIR. The impacts from the Project would not be substantially more severe than those described in the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing transportation conditions (e.g., roadways, road use) present in the areas outside the CalVTP treatable landscape are essentially the same as those within the treatable landscape. Therefore, the transportation impact identified in the PEIR for individual projects is also the same, as described above.

New Transportation Impacts

The proposed treatments are consistent with the treatment types and activities covered in the CalVTP PEIR. The site-specific characteristics of the proposed treatments are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Sections 3.15.1 and 3.15.2 in Volume II of the Final PEIR).

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the existing environmental conditions pertinent to transportation that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as previously described. The Project is consistent with the types of projects covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable

landscape would not give rise to any new significant impact. Therefore, no new impact related to transportation would occur.

PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact UTIL-1: Result in Physical Impacts Associated with Provision of Sufficient Water Supplies, Including Related Infrastructure Needs	LTS	Section 3.16.1 pp. 3.16-2 – 3.16-3; Impact UTIL-1 p. 3.16-9	Yes	NA	NA	LTS	No	Yes
Impact UTIL-2: Generate Solid Waste in Excess of State Standards or Exceed Local Infrastructure Capacity	PSU	Section 3.16.1 pp. 3.16-3 - 3.16-5; Impact UTIL-2 pp. 3.16-10 – 3.16-12	Yes	AD-3; UTIL-1	NA	LTS	No	Yes
Impact UTIL-3: Comply with Federal, State, and Local Management and Reduction Goals, Statutes, and Regulations Related to Solid Waste	LTS	Section 3.16.2 pp. 3.16-6 – 3.16-7; Impact UTIL-2 p. 3.16-12	Yes	AD-3; UTIL-1	NA	LTS	No	Yes

[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

A minimal amount of water would be required for fire suppression during prescribed burning activities and for dust control during vegetation removal within non-shaded fuel breaks. Water would be transported via water trucks and fire trucks. PEIR Section 3.12, "Land Use and Planning, Population and Housing," determined treatment activities would not lead to residential community development or

other development that may increase demand for water. Therefore, impacts were found to be less than significant. The Project's impacts are consistent with those analyzed in the PEIR because the amount of water required for prescribed burning and dust control is within the scope of activities and impacts determined in the PEIR. Due to the minimal amount of water required for these treatment activities, there would be minimal water demand on local water providers. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

The Project includes land in the proposed treatment area that is outside the CalVTP treatable landscape, which constitutes a change to the geographic extent presented in the PEIR. Within the boundary of the project area, the existing conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because the water service providers would be the same. Within and outside the treatable landscape, water providers and water use would essentially be the same, therefore, this impact is within the scope of the PEIR and can be considered less than significant impacts. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact UTIL-2

Mechanical and manual vegetation treatments would generate organic woody biomass as a result of vegetation removal within the Project treatment areas. Methods for managing biomass for this Project include natural decomposition (e.g., chip and broadcast, lop and scatter), pile burning, and prescribed fire. Natural decomposition is the preferred method of biomass management because natural decomposition aids in erosion prevention and excessive soil disturbance, prevents the spread of disease and pathogens off-site, and reduces greenhouse gas emissions that result from transporting materials off-site. If broadcasting woody material is not possible, the remaining biomass would be disposed of via pile burning. The potential to generate solid waste in excess of state standards was examined in the PEIR and was found to be a less-than-significant impact. SPRs AD-3 and UTIL-1 would apply to this potential impact. SPR AD-3 requires the project proponent to design and implement the project consistent with local plans and ordinances, and SPR UTIL-1 requires the project proponent to prepare a Solid Organic Waste Disposition Plan to guide biomass disposal. The potential biomass impact is within the scope of the activities and impacts identified in the PEIR as the conditions for removing biomass are consistent with the analysis in the PEIR.

The PEIR found that while some localities within the state may currently have the requisite infrastructure to process woody biomass or may develop this capacity in the near future, it cannot be guaranteed that all localities across the state would develop the capacities to process excess solid organic waste produced from treatment activities within the timeframes of the proposed activities. Therefore, because feasible mitigation is not available, and to not risk understating potential future impacts in light of uncertainties about market response, the PEIR classified this impact as potentially significant and unavoidable, notwithstanding the possibility that capacity could increase with the scale of treatments such that it would not be exceeded for most or all individual treatments. However, biomass is not anticipated to be hauled off-site for this Project. Considering biomass is not anticipated to be hauled off-site, the Project's impact to solid waste disposal is less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe impact than identified in the PEIR.

The Project includes land in the proposed treatment area that is outside the CalVTP treatable landscape, which constitutes a change to the geographic extent presented in the PEIR. However, the environmental

conditions outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent to the treatable landscape, would generate a similar amount of solid waste, and would use the same biomass disposal methods (natural decomposition and pile burning). The Project reflects a lesser impact than the statewide program, and the determination is consistent with the PEIR and would not constitute a substantially more severe impact than identified in the PEIR.

Impact UTIL-3

Project treatments as a result of vegetation removal within the project site would generate biomass, which would be disposed of by natural decomposition (e.g., chip and broadcast, lop and scatter) and pile burning. All biomass would be disposed of on-site; no off-site disposal would occur for this Project. The Project would be in compliance with federal, state, and local goals related to solid waste, as required by SPR AD-3. The Project would apply SPR UTIL-1, which requires implementation of a Solid Organic Waste Disposition Plan. The Project is within the scope of activities and impacts identified in the PEIR.

The inclusion of land outside the treatable landscape constitutes a change to the geographic extent of the PEIR. However, the environmental conditions outside the treatable landscape are essentially the same as those within the treatable landscape because they are adjacent to the treatable landscape, would generate a similar amount of solid waste, and would use the same biomass disposal methods (natural decomposition and pile burning). No off-site biomass disposal would occur with solid waste generated on land outside the treatable landscape. Therefore, the impact related to compliance with federal, state, and local goals and regulations regarding solid waste is less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Impacts to Public Services, Utilities and Service Systems

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

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	HAZ-2, HAZ-3, HAZ-4	NA	LTS	No	Yes
Impact WIL-2: Expose People or Structures to Substantial Risks Related to Post-Fire Flooding or Landslides	LTS	Section 3.17.1; Impact WIL-2 pp. 3.17-15 – 3.17-16	Yes	AQ-3, GEO-3, GEO-4, GEO-5, GEO-8	NA	LTS	No	Yes

[1]NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

New 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

The primary goal of the Project is to create and maintain strategic fuel breaks surrounding the community of Whitethorn to support fire prevention and suppression. In the event of a wildfire, the implemented Project would provide safe access for fire engines and firefighting personnel, support the creation of fire lines, and potentially slow the spread and lower fire intensity.

Initial and maintenance treatments would include pile burning, prescribed (broadcast) burning, and mechanical treatments, which could result in temporary risks associated with uncontrolled wildfire, accidental wildfire ignition, or risk of a prescribed fire escaping its control lines. The potential increase in exposure to wildfire during implementation of treatments was examined in the PEIR and found to be less than significant because activities are conducted under controlled conditions with safety measures that minimize fire risk while reducing long-term hazard. Increased wildfire risk associated with prescribed pile burning, prescribed burning, and use of heavy equipment in vegetated areas is within the scope of the PEIR. SPRs HAZ-2, HAZ-3, and HAZ-4 would be implemented to reduce the risk of exposure to wildfire by requiring spark arrestors on mechanical hand tools, requiring crews to carry one fire

extinguisher per chainsaw, and prohibiting smoking in vegetated areas. Based on the implementation of the SPRs, the potential to substantially exacerbate fire risk and expose people to uncontrolled spread of wildfire would be less than significant.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the wildfire risk of the project area is essentially the same within and outside the treatable landscape; therefore, the wildfire impact 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 covered in the PEIR.

Impact WIL-2

The potential for post-fire flooding and erosion, including landslides, was examined in the PEIR and found to be less than significant because the treatments are designed to reduce wildfire severity, which in turn lowers the risk of intense burn conditions that typically lead to soil destabilization and runoff. Additionally, the treatments follow best management practices that help preserve soil structure and minimize disturbance, thereby reducing the likelihood of post-fire hydrologic hazards. Mechanical treatment activities would occur predominantly on slopes below 40 percent grade and along ridges and may occur on slopes greater than 40 percent grade with equipment that can reach target vegetation from existing road infrastructure or another stable operating surface. Mechanical treatments would not be applied on slopes above 50 percent grade unless the above conditions are met.

Implementation of SPRs AQ-3, GEO-3 through GEO-5 and GEO-8 would reduce the risk of erosion and landslides post-prescribed burn and/or post-fire, in the event that a wildfire occurred as a result of the proposed treatments or an unrelated occurrence. Implementation of SPR AQ-3 would minimize soil burn severity during prescribed burns, which would help to retain vegetation to stabilize the soil. SPR GEO-3 requires stabilization of disturbed soil areas during treatment activities, SPR GEO-4 requires inspection of the treatment area for proper erosion control measures prior to the rainy season and immediately following the first large rainfall event, and SPR GEO-5 requires stormwater to be drained via water breaks to decrease the potential for channelized erosion within linear treatment areas. SPR GEO-8 requires the input of a Registered Professional Forester (RPF) or licensed geologist to evaluate treatment areas with a 50% grade or more that are unstable or have unstable soils. As described in Impact WIL-1, the Project intends to reduce wildfire risk, in part by creating and maintaining fuel breaks that would serve as an opportunity for fire resources to stop or slow the spread of wildfire, which may lead to smaller burn scars, or less area susceptible to post-fire flooding or erosion.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the project area, the post-fire landslide risk of the project area is essentially the same within and outside the CalVTP treatable landscape due to similar slopes, soils, hydrological and geological conditions. Therefore, the wildfire impact outside the treatable landscape is also the same and less than significant, as described above, with implementation of the same SPRs. The impact outside the treatable landscapes would be consistent with the lands analyzed in the PEIR.

New Impacts to Wildfire

The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR. The project proponent has also determined that the inclusion of land in the

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

LIST OF ABBREVIATIONS

AB	Assembly Bill
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
CAAQS	California ambient air quality standards
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CalVTP	California Vegetation Treatment Program
CARB	California Air Resources Board
CDOC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CWHR	California Wildlife Habitat Relationship
CWPPP	(Humboldt) County Community Wildfire Protection Plan
DBH	diameter at breast height
diesel PM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area

ESA	Federal Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area
FC	Federal Candidate
FE	Federal endangered
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FP	Fully Protected
FP	Fully Protected (CDFW)
FPT	Federal proposed threatened
FRAP	Fire and Resource Assessment Program
FT	Federal threatened
GHG	greenhouse gas
GIS	Geographic Information Systems
HA	Hydrologic Area
HCP	Habitat Conservation Plan
HCRCD	Humboldt County Resource Conservation District
HU	Hydrologic Unit
IPaC	Information for Planning and Conservation
LCP	Local Coastal Program
LTS	less than significant
LTMP	Long-Term Management Plan
LUST	leaking underground storage tank
MCV	Manual of California Vegetation
MM	mitigation measure
MMRP	mitigation monitoring and reporting program
NA	not applicable
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NCUAQMD	North Coast Unified Air Quality Management District

NMFS	National Marine Fisheries Service
NOA	naturally occurring asbestos
NOAA	National Oceanic and Atmospheric Administration
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
PEIR	Programmatic Environmental Impact Report
PFIRS	Prescribed Fire Information Reporting System
PG&E	Pacific Gas & Electric Company
PRC	Public Resources Code
PS	potentially significant
PSU	potentially significant and unavoidable
PSA	Project-Specific Analysis
RPF	Registered Professional Forester
RWQCB	Regional Water Quality Control Board
SC	State Candidate
SCC	State Coastal Conservancy
SE	State Endangered
SE	State Endangered (California)
SENL	single event noise level
SFI	Sanctuary Forest Inc.
SOD	Sudden Oak Death
SR	State Rare (California)
ST	State Threatened
ST	State Threatened (California)
SMP	smoke management plan
SPR	standard project requirement
SR	State Route
SRA	State Responsibility Area

SSC	Species of Special Concern
SSC	Species of special concern (CDFW)
SU	significant and unavoidable
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TMP	traffic management plan
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VMT	vehicle miles traveled
WDR	waste discharge requirement
WLPZ	Watercourse and Lake Protection Zone
WUI	wildland-urban interface

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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
Administrative Standard Project Requirements				
SPR AD-1 Project Proponent Coordination: For treatments coordinated with CAL FIRE, CAL FIRE will meet with the project proponent to discuss all natural and environmental resources that must be protected using SPRs and any applicable mitigation measures; identify any sensitive resources onsite; and discuss resource protection measures. For any prescribed burn treatments, CAL FIRE will also discuss the details of the burn plan in the incident action plan (IAP). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to and during work**	**CAL FIRE**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to and during work**	**SFI and HCRCD**	**SFI and HCRCD**
SPR AD-4 Public Notifications for Prescribed Burning:: At least 1 day 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**SFI and HCRCD**	**SFI and HCRCD**
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
applies to mechanical and manual treatment activities and all treatment types, including treatment maintenance.				
SPR AES-2 Avoid Staging within Viewsheds: The project proponent will store all treatment-related materials, including vehicles, vegetation treatment debris, and equipment, outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. The project proponent will also locate materials staging and storage areas outside of the viewshed of public trails, parks, recreation areas, and roadways to the extent feasible. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and HCRCD**
Air Quality Standard Project Requirements				
SPR AQ-1 Comply with Air Quality Regulations: The project proponent will comply with the applicable air quality requirements of air districts within whose jurisdiction the project is located. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor, SFI and HCRCD**	**NCUAQMD**
SPR AQ-2 Submit Smoke Management Plan: The project proponent will submit a smoke management plan for all prescribed burns to the applicable air district, in accordance with 17 CCR Section 80160. Pursuant to this regulation a smoke management plan will not be required for burns less than 10 acres that also will not be conducted near smoke sensitive areas, unless otherwise directed by the air district. Burning will only be conducted in compliance with the burn authorization program of the applicable air district(s) having jurisdiction over the treatment area. Example of a smoke management plan is in Appendix PD-2. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**SFI and HCRCD**	**NCUAQMD**
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	**Initial Treatment: Y** **Treatment Maintenance: Y** *Note. Humboldt County Prescribed Burn*	**Prior to the start of work**	**SFI and HCRCD**	**CAL FIRE**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.	*Association Template or other plan comparable to the CAL FIRE template may be used instead*			
SPR AQ-4 Minimize Dust: To minimize dust during treatment activities, the project proponent will implement the following measures: ▶ Limit the speed of vehicles and equipment traveling on unpaved areas to 15 miles per hour to reduce fugitive dust emissions, in accordance with the California Air Resources Board (CARB) Fugitive Dust protocol. ▶ If road use creates excessive dust, the project proponent will wet appurtenant, unpaved, dirt roads using water trucks or treat roads with a non-toxic chemical dust suppressant (e.g., emulsion polymers, organic material) during dry, dusty conditions. Any dust suppressant product used will be environmentally benign (i.e., non-toxic to plants and will not negatively impact water quality) and its use will not be prohibited by ARB, EPA, or the State Water Resources Control Board (SWRCB). The project proponent will not over-water exposed areas such that the water results in runoff. The type of dust suppression method will be selected by the project proponent based on soil, traffic, site-specific conditions, and air quality regulations. ▶ Remove visible dust, silt, or mud tracked-out on to public paved roadways where sufficient water supplies and access to water is available. The project proponent will remove dust, silt, and mud from vehicles at the conclusion of each workday, or at a minimum of every 24 hours for continuous treatment activities, in accordance with Vehicle Code Section 23113. ▶ Suspend ground-disturbing treatment activities, including land clearing and bulldozer lines, when there is visible dust transport (particulate pollution) outside the treatment boundary, if the particulate emissions may "cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property," per Health and Safety Code Section 41700. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and HCRCD**
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	**Initial Treatment: Y**	**During work**	**Contractor, SFI and HCRCD**	**CAL FIRE, NCUAQMD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.	**Treatment Maintenance: Y**			
Archaeological, Historical, and Tribal Cultural Resources Standard Project Requirements				
SPR CUL-1 Conduct Record Search: An archaeological and historical resource record search will be conducted per the applicable state or local agency procedures. Instead of conducting a new search, the project proponent may use recent record searches containing the treatment area requested by a landowner or other public agency in accordance applicable agency guidance. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: N**	**Prior to the start of work**	**Contractor**	**SFI and 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. ▶ 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.	**Initial Treatment: Y** **Treatment Maintenance: N**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**
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	**Initial Treatment: Y**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**

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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.				
SPR CUL-7 Avoid Built Historical Resources: If the records search identifies built historical resources, as defined in Section 15064.5 of the State CEQA Guidelines, the project proponent will avoid these resources. Within a buffer of 100 feet of the built historical resource, there will be no prescribed burning or mechanical treatment activities Buffers less than 100 feet for built historical resources will only be used after consultation with and receipt of written approval from a qualified archaeologist. If the records search does not identify known historical resources in the treatment area, but structures (i.e., buildings, bridges, roadways) over 50 years old that have not been evaluated for historic significance are present in the treatment area, they will similarly be avoided. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, if needed**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and 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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
treatment project, habitat assessments will be completed at a time of year that is appropriate for identifying habitat and no more than one year prior to the submittal of the PSA, unless it can be demonstrated in the PSA that habitat assessments older than one year remain valid (e.g., site conditions are unchanged and no treatment activity has occurred since the assessment). If more than one year passes between completion of the PSA and initiation of the treatment project, the project proponent will verify the continued accuracy of the PSA prior to beginning the treatment project by reviewing for any data updates and/or visiting the site to verify conditions. Based on the results of the data review and reconnaissance-level survey, the project proponent, in consultation with a qualified RPF or biologist, will determine which one of the following best characterizes the treatment: 1. **Suitable Habitat Is Present but Adverse Effects Can Be Clearly Avoided**. If, based on the data review and reconnaissance-level survey, the qualified RPF or biologist determines that suitable habitat for sensitive biological resources is present but adverse effects on the suitable habitat can clearly be avoided through one of the following methods, the avoidance mechanism will be implemented prior to initiating treatment and will remain in effect throughout the treatment: a. by physically avoiding the suitable habitat, or b. by conducting treatment outside of the season when a sensitive resource could be present within the suitable habitat or outside the season of sensitivity (e.g., outside of special-status bird nesting season, 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				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
survey requirements are addressed for each resource type in relevant SPRs (e.g., additional survey requirements are presented for special-status plants in SPR BIO-7). This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR BIO-2: Require Biological Resource Training for Workers. The project proponent will require crew members and contractors to receive training from a qualified RPF or biologist prior to beginning a treatment project. The training will describe the appropriate work practices necessary to effectively implement the biological SPRs and mitigation measures and to comply with the applicable environmental laws and regulations. The training will include the identification, relevant life history information, and avoidance of pertinent special-status species; identification and avoidance of sensitive natural communities and habitats with the potential to occur in the treatment area; impact minimization procedures; and reporting requirements. The training will instruct workers when it is appropriate to stop work and allow wildlife encountered during treatment activities to leave the area unharmed and when it is necessary to report encounters to a qualified RPF, biologist, or biological technician. The qualified RPF, biologist, or biological technician will immediately contact CDFW or USFWS, as appropriate, if any wildlife protected by the California Endangered Species Act (CESA) or Federal Endangered Species Act (ESA) is encountered and cannot leave the site on its own (without being handled). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and 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: ▶ 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).	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, if needed**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ 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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
otherwise that is approved by applicable regulatory agencies, such as adding large woody material to a stream to enhance fish habitat, e.g., see Accelerated Wood Recruitment and Timber Operations: Process Guidance from the California Timber Harvest Review Team Agencies and National Marine Fisheries Service). ▶ Vegetation removal that could reduce stream shading and increase stream temperatures will be avoided. ▶ Ground disturbance within riparian habitats will be limited to the minimum necessary to implement effective treatments. This will consist of the minimum disturbance area necessary to reduce hazardous fuels and return the riparian community to a natural fire regime (i.e., Condition Class 1) considering historic fire return intervals, climate change, and land use constraints. ▶ Only hand application of herbicides approved for use in aquatic environments will be allowed and only during low-flow periods or when seasonal streams are dry. ▶ The project proponent will notify CDFW when required by California Fish and Game Code Section 1602 prior to implementing any treatment activities in riparian habitats. Notification will identify the treatment activities, map the vegetation to be removed, identify the impact avoidance identification methods to be used (e.g., flagging), and appropriate protections for the retention of shaded riverine habitat, including buffers and other applicable measures to prevent erosion into the waterway. ▶ In consideration of spatial variability of riparian vegetation types and condition and consistent with California Forest Practice Rules Section 916.9(v) (February 2019 version), a different set of vegetation retention standards and protection measures from those specified in the above bullets may be implemented on a site-specific basis if the qualified RPF and the project proponent demonstrate through substantial evidence that alternative design measures provide a more effective means of achieving the treatment goals objectives and would result in effects to the Beneficial Functions of Riparian Zones equal or more favorable than those expected to result from application of the above measures. Deviation from the above design specifications, different protection measures and design standards will only be approved when the treatment plan incorporates an evaluation of beneficial functions of the riparian habitat and with written concurrence from CDFW. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub. The project proponent will design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are				

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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
including treatment maintenance. Additional measures will be applied to ecological restoration treatment types: ▶ For ecological restoration treatment types, complete removal of the mature shrub layer will not occur in native chaparral and coastal sage scrub vegetation types. ▶ Ecological restoration treatments will not be implemented in vegetation types that are within their natural fire return interval (i.e., time since last burn is less than the average time listed as the fire return interval range in Table 3.6-1) unless the project proponent demonstrates with substantial evidence that the habitat function of chaparral and coastal sage scrub would be improved. ▶ A minimum of 35 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density (i.e., if baseline shrub canopy density is 60 percent, post treatment shrub canopy density will be no less than 40 percent). A different percent relative cover can be retained if the project proponent demonstrates with substantial evidence that alternative treatment design measures would result in effects on the habitat function of chaparral and coastal sage scrub that are 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				

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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; ▶ 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and HCRCD**
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."	**Initial Treatment: Y** **Treatment Maintenance: N**	**Prior to the start of work, if needed**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.				
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
plants, noxious weeds, or invasive wildlife. Anti-fungal wash agents will be specified if the equipment has been exposed to any pathogen that could affect native species; ▶ inspect all heavy equipment, vehicles, tools, or other treatment-related materials for sand, mud, or other signs that weed seeds or propagules could be present prior to use in the treatment area. If the equipment is not clean, the qualified RPF or biological technician will deny entry to the work areas; ▶ stage equipment in areas free of invasive plant infestations unless there are no uninfested areas present within a reasonable proximity to the treatment area; ▶ identify significant infestations of invasive plant species (i.e., those rated as invasive by Cal-IPC or designated as noxious weeds by California Department of Food and Agriculture) during reconnaissance-level surveys and target them for removal during treatment activities. Treatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles; ▶ 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.	**Initial Treatment: Y** **Treatment MaintenanceY**	**Prior to the start of work, if needed**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.				
SPR BIO-11. Install Wildlife-Friendly Fencing (Prescribed Herbivory). If temporary fencing is required for prescribed herbivory treatment, a wildlife-friendly fencing design will be used. The project proponent will require a qualified RPF or biologist to review and approve the design before installation to minimize the risk of wildlife entanglement. The fencing design will meet the following standards: ▶ Minimize the chance of wildlife entanglement by avoiding barbed wire, loose or broken wires, or any material that could impale or snag a leaping animal; and, if feasible, keeping electric netting-type fencing electrified at all times or laid down while not in use. ▶ Charge temporary electric fencing with intermittent pulse energizers; continuous output fence chargers will not be permitted. ▶ Allow wildlife to jump over easily without injury by installing fencing that can flex as animals pass over it and installing the top wire low enough (no more than approximately 40 inches high on flat ground) to allow adult ungulates to jump over it. The determination of appropriate fence height will consider slope, as steep slopes are more difficult for wildlife to pass. ▶ Be highly visible to birds and mammals by using high-visibility tape or wire, flagging, or other markers. This SPR applies only to prescribed herbivory and all treatment types, including treatment maintenance.	**Initial Treatment: N** **Treatment Maintenance: N**			
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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
If active nesting season avoidance is not feasible, a qualified RPF or biologist will conduct a survey for common nesting birds, including raptors. Existing records (e.g., CNDDB, eBird database, State Wildlife Action Plan) should be reviewed in advance of the survey to identity the common nesting birds, including raptors, that are known to occur in the vicinity of the treatment site. The survey area will encompass reasonably accessible areas of the treatment site and the immediately surrounding vicinity viewable from the treatment site. The survey area will be determined by a qualified RPF or biologist, based on the potential species in the area, location of suitable nesting habitat, and type of treatment. For vegetation removal or project activities that would occur during the nesting season, the survey will be conducted at a time that balances the effectiveness of detecting nests and the reasonable consideration of potential avoidance strategies. Typically, this timeframe would be up to 3 weeks before treatment. The survey will occur in a single survey period of sufficient duration to reasonably detect nesting birds, including raptors, typically one day for most treatment projects (depending on the size, configuration, and vegetation density in the treatment site), and conducted during the active time of day for target species, typically close to dawn and/or dusk. The survey may be conducted concurrently with other biological surveys, if they are required by other SPRs. Survey methods will be tailored by the qualified RPF or biologist to site and habitat conditions, typically involving walking throughout the survey area, visually searching for nests and birds exhibiting behavior that is typical of breeding (e.g., delivering food). If an active nest is observed (i.e., presence of eggs and/or chicks) or determined to likely be present based on nesting bird behavior, the project proponent will implement a feasible strategy to avoid disturbance of active nests, which may include, but is not limited to, one or more of the following: ▶ **Establish Buffer.** The project proponent will establish a temporary, species-appropriate buffer around the nest sufficient to reasonably expect that breeding would not be disrupted. Treatment activities will be implemented outside of the buffer. The buffer location will be determined by a qualified RPF or biologist. Factors to be considered for determining buffer location will include: presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species 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				

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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work, if needed**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work, if needed**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work, if needed**	**Contractor**	**SFI and HCRCD**
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	**Initial Treatment: Y**	**Prior to the start of work, and during work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.	**Treatment Maintenance: Y**			
SPR GEO-5 Drain Stormwater via Water Breaks: The project proponent will drain compacted and/or bare linear treatment areas capable of generating storm runoff via water breaks using the spacing and erosion control guidelines contained in Sections 914.6, 934.6, and 954.6(c) of the California Forest Practice Rules (February 2019 version). Where waterbreaks cannot effectively disperse surface runoff, including where waterbreaks cause surface run-off to be concentrated on downslopes, other erosion controls will be installed as needed to maintain site productivity by minimizing soil loss. This SPR applies only to mechanical, manual, and prescribed burn treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
(3) Prescribed herbivory treatments will not be used in areas with over 50 percent slope. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.				
SPR GEO-8 Steep Slopes: The project proponent will require a Registered Professional Forester (RPF) or licensed geologist to evaluate treatment areas with slopes greater than 50 percent for unstable areas (areas with potential for landslide) and unstable soils (soil with moderate to high erosion hazard). If unstable areas or soils are identified within the treatment area, are unavoidable, and will be potentially directly or indirectly affected by the treatment, a licensed geologist (P.G. or C.E.G.) will determine the potential for landslide, erosion, of other issue related to unstable soils and identity measures (e.g., those in SPR GEO-7) that will be implemented by the project proponent such that substantial erosion or loss of topsoil would not occur. This SPR applies only to mechanical treatment activities and WUI fuel reduction, non-shaded fuel breaks, and ecological restoration treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**
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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and 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	**Initial Treatment: Y**	**During work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
least 3 feet in diameter (PRC Section 4423.4). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Treatment Maintenance: Y**			
SPR HAZ-5 Spill Prevention and Response Plan: The project proponent or licensed Pest Control Advisor (PCA) will prepare a Spill Prevention and Response Plan (SPRP) prior to beginning any herbicide treatment activities to provide protection to onsite workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants. The SPRP will include (but not be limited to): ▶ a map that delineates staging areas, and storage, loading, and mixing areas for herbicides; ▶ a list of items required in an onsite spill kit that will be maintained throughout the life of the activity; ▶ procedures for the proper storage, use, and disposal of any herbicides, adjuvants, or other chemicals used in vegetation treatment. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**
SPR HAZ-6 Comply with Herbicide Application Regulations: The project proponent will coordinate pesticide use with the applicable County Agricultural Commissioner(s), and all required licenses and permits will be obtained prior to herbicide application. The project proponent will prepare all herbicide applications to do the following: ▶ Be implemented consistent with recommendations prepared annually by a licensed PCA. ▶ Comply with all appropriate laws and regulations pertaining to the use of pesticides and safety standards for employees and the public, as governed by the EPA, DPR, and applicable local jurisdictions. ▶ Adhere to label directions for application rates and methods, storage, transportation, mixing, container disposal, and weather limitations to application such as wind speed, humidity, temperature, and precipitation. ▶ Be applied by an applicator appropriately licensed by the State. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work**	**Contractor**	**SFI and 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,	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.				
SPR HAZ-8 Minimize Herbicide Drift to Public Areas: The project proponent will employ the following herbicide application parameters during herbicide application to minimize drift into public areas: ▶ application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative); ▶ spray nozzles will be configured to produce the largest appropriate droplet size to minimize drift; ▶ low nozzle pressures (30-70 pounds per square inch) will be utilized to minimize drift; and ▶ spray nozzles will be kept within 24 inches of vegetation during spraying. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and HCRCD**
SPR HAZ-9 Notification of Herbicide Use in the Vicinity of Public Areas: For herbicide applications occurring within or adjacent to public recreation areas, residential areas, schools, or any other public areas within 500 feet, the project proponent will post signs at each end of herbicide treatment areas and any intersecting trails notifying the public of the use of herbicides. The signs will include the signal word (i.e., Danger, Warning or Caution), product name, and manufacturer; active ingredient; EPA registration number; target pest; treatment location; date and time of application; restricted entry interval, if applicable per the label requirements; date which notification sign may be removed; and a contact person with a telephone number. Signs will be posted prior to the start of treatment and notification will remain in place for at least 72 hours after treatment ceases. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and 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	**Initial Treatment: Y**	**During work**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Treatment Maintenance: Y**			
SPR HYD-2 Avoid Construction of New Roads: The project proponent will not construct or reconstruct (i.e., cutting or filling involving less than 50 cubic yards/0.25 linear road miles) any new roads (including temporary roads). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and 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: ▶ Environmentally sensitive areas such as waterbodies, wetlands, or riparian areas will be identified in the treatment prescription and excluded from prescribed herbivory project areas using temporary fencing or active herding. A buffer of approximately 50 feet will be maintained between sensitive and actively grazed areas. ▶ Water will be provided for grazing animals in the form of an on-site stock pond or a portable water source located outside of environmentally sensitive areas. ▶ Treatment prescriptions will be designed to protect soil stability. Grazing animals will be herded out of an area if accelerated soil erosion is observed. This SPR applies to prescribed herbivory treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work**	**Contractor**	**SFI and HCRCD**
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work**	**Contractor**	**SFI and HCRCD**

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

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

Water Class	Class I	Class II	Class III	Class IV
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.	1) Fish always or seasonally present offsite within 1000 feet downstream and/or 2) Aquatic habitat for nonfish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.	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.	Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.
WLPZ Width (ft) – Distance from top of bank to the edge of WLPZ				
< 30 % Slope	75	50	Sufficient to prevent the degradation of downstream beneficial uses of water. Determined on a site-specific basis.	
30-50 % Slope	100	75		
>50 % Slope	150	100		

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

The following WLPZ protections will be applied for all treatments:

- Treatment activities with WLPZs will retain at least 75 percent surface cover and undisturbed area to act as a filter strip for raindrop energy dissipation and for wildlife habitat. If this percentage is reduced a qualified RPF will provide the project proponent

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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
and 50 feet where side-slope is 30 percent or greater. An RPF will describe the limitations of heavy equipment within the ELZ and, where appropriate, will include additional measures to protect the beneficial uses of water. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR HYD-5 Protect Non-Target Vegetation and Special-status Species from Herbicides: The project proponent will implement the following measures when applying herbicides: ▶ Locate herbicide mixing sites in areas devoid of vegetation and where there is no potential of a spill reaching non-target vegetation or a waterway. ▶ Use only herbicides labeled for use in aquatic environments when working in riparian habitats or other areas where there is a possibility the herbicide could come into direct contact with water. Only hand application of herbicides will be allowed in riparian habitats and only during low-flow periods or when seasonal streams are dry. ▶ No terrestrial or aquatic herbicides will be applied within WLPZs of Class I and II watercourses, if feasible. If this is not feasible, hand application of herbicides labeled for use in aquatic environments may be used within the WLPZ provided that the project proponent notifies the applicable regional water quality control board no fewer than 15 days prior to herbicide application. The feasibility of avoiding herbicide application within WLPZ of Class I and II watercourses will be determined by the project proponent and may be based on whether doing so will preclude achieving CalVTP program objectives, including, but not limited to, protection of vulnerable communities. The reasons for infeasibility will be documented in the PSA. ▶ No herbicides will be applied within a 50-foot buffer of ESA or CESA listed plant species or within 50 feet of dry vernal pools. ▶ For spray applications in and adjacent to habitats suitable for special-status species, use herbicides containing dye (registered for aquatic use by DPR, if warranted) to prevent overspray. ▶ Application will cease when weather parameters exceed label specifications or when sustained winds at the site of application exceeds 7 miles per hour (whichever is more conservative); ▶ No herbicide will be applied during precipitation events or if precipitation is forecast 24 hours before or after project activities. This SPR applies to herbicide treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work, if needed**	**Contractor**	**SFI and HCRCD**

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

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
extent feasible, to minimize noise exposure. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR NOI-5 Restrict Equipment Idle Time: The project proponent will require that all motorized equipment be shut down when not in use. Idling of equipment and haul trucks will be limited to 5 minutes. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**
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 will coordinate with the owner/manager of that recreation area or facility. If temporary closure of a recreation area or facility is required, the project proponent will work with the owner/manager to post notifications of the closure at least 2 weeks prior to the commencement of the treatment activities. Additionally, notification of the treatment activity will be provided to the Administrative Officer (or equivalent official responsible for distribution of public information) of the county(ies) in which the affected recreation area or facility is located. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, if needed**	**Contractor**	**SFI and HCRCD**
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work, if needed**	**Contractor**	**SFI and HCRCD**

Standard Project Requirements	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
(but are not be limited to) construction signage to provide motorists with notification and information when approaching or traveling along the affected roadway facilities, flaggers for lane closures to provide temporary traffic control along affected roadway facilities, treatment schedule restrictions to avoid seasons or time periods of peak vehicle traffic, haul-trip, delivery, and/or commute time restrictions that would be implemented to avoid peak traffic days and times along affected roadway facilities. If the TMP identifies impacts on transportation facilities outside of the jurisdiction of the project proponent, the TMP will be submitted to the agency with jurisdiction over the affected roadways prior to commencement of vegetation treatment projects. This SPR applies to all treatment activities and treatment types, including treatment maintenance. Smoke generated during prescribed burn operations could potentially affect driver visibility and traffic operations along nearby roadways. Direct smoke impacts to roadway visibility and indirect impacts related to driver distraction will be considered during the planning phase of burning operations. Smoke impacts and smoke management practices specific to traffic operations during prescribed fire operations will be identified and addressed within the TMP. The TMP will include measures to monitor smoke dispersion onto public roadways, and traffic control operations will be initiated in the event burning operations could affect traffic safety along any roadways. This SPR applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.				
Public Services and Utilities Standard Project Requirements				
SPR UTIL-1: Solid Organic Waste Disposition Plan. For projects requiring the disposal of material outside of the treatment area, the project proponent will prepare an Organic Waste Disposition Plan prior to initiating treatment activities. The Solid Organic Waste Disposition Plan will include the amount (e.g., tons) of solid organic waste to be managed onsite (i.e., scattering of wood materials, generating unburned piles, and pile burning) and transported offsite for processing (i.e., biomass power plant, wood product processing facility, composting). If the project proponent intends to transport solid organic waste offsite, the Solid Organic Waste 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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**

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

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ Off-road equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NO_X and PM.				
Archaeological, Historical, and Tribal Cultural Resources				
Mitigation Measure CUL-2: Protect Inadvertent Discoveries of Unique Archaeological Resources or Subsurface Historical Resources If any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, are discovered during ground-disturbing activities, all ground-disturbing activity within 100 feet of the resources will be halted and a qualified archaeologist will assess the significance of the find. The qualified archaeologist will work with the project proponent to develop a primary records report that will comply with applicable state or local agency procedures. If the archaeologist determines that further information is needed to evaluate significance, a data recovery plan will be prepared. If the find is determined to be significant by the qualified archaeologist (i.e., because the find constitutes a unique archaeological resource, subsurface historical resource, or tribal cultural resource), the archaeologist will work with the project proponent to develop appropriate procedures to protect the integrity of the resource. Procedures could include preservation in place (which is the preferred manner of mitigating impacts to archaeological sites), archival research, subsurface testing, or recovery of scientifically consequential information from and about the resource. Any find will be recorded standard DPR Primary Record forms (Form DPR 523) will be submitted to the appropriate regional information center.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work, if needed**	**Contractor**	**SFI and HCRCD**
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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and after work, if needed**	**Contractor**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work, if needed**	**Contractor**	**SFI and HCRCD**

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

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
during treatment activities. For a treatment to be considered beneficial to non-listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required.				
Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants If significant impacts on listed or non-listed special-status plants cannot feasibly be avoided as specified under the circumstances described under Mitigation Measures BIO-1a and 1b, the project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant impacts that require compensatory mitigation and describes the compensatory mitigation strategy being implemented and how unavoidable losses of special-status plants will be compensated. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. If the special-status plant taxa are listed under ESA or CESA, the plan will be submitted to CDFW and/or USFWS (as appropriate) for review and comment. The first priority for compensatory mitigation will be preserving and enhancing existing populations outside of the treatment area in perpetuity, or if that is not an option because existing populations that can be preserved in perpetuity are not available, one of the following mitigation options will be implemented by the project proponent instead: ▶ creating populations on mitigation sites outside of the treatment area through seed collection and dispersal (annual species) or transplantation (perennial species); ▶ purchasing mitigation credits from a CDFW- or USFWS-approved conservation or mitigation bank in sufficient quantities to offset the loss of occupied habitat; and ▶ if the affected special-status plants are not listed under ESA or CESA, compensatory mitigation may include restoring or enhancing degraded habitats so that they are made suitable to support special-status plant species in the future. If relocation efforts are part of the Compensatory Mitigation Plan, the plan will include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements. The following performance standards will be applied for relocation:	**Initial Treatment: Y** **Treatment Maintenance: N**	**Prior to the start of work, if needed**	**Contractor**	**SFI and HCRCD, CDFW**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ 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	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work, if needed**	**Contractor**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. ▪ If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that listed or fully protected wildlife with specific requirements for high canopy cover (e.g., Humboldt marten, fisher, spotted owl, coastal California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained. ▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.				
Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities) If other special-status wildlife species (i.e., species not listed under CESA or ESA or California Fully Protected, but meeting the definition of special status as stated in Section 3.6.1 of the Program EIR) are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid or minimize adverse effects to the species by implementing the following. <u>Avoid Mortality, Injury, or Disturbance of Individuals</u> ▶ The project proponent will implement the following to avoid mortality, injury, or disturbance of individuals: For all treatment activities except prescribed burning, the project proponent will establish a no-disturbance buffer around occupied sites (e.g., nests, dens, roosts, middens, burrows, nurseries). Buffer size will be determined by a qualified RPF or biologist using the most current, commonly accepted science and will consider published agency guidance; however, buffers will generally be a minimum of 100 feet, unless site conditions indicate a smaller buffer would be sufficient for protection or a larger buffer would be needed. Factors to be considered in determining buffer size will include, but not be limited to, the species'	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work, if needed**	**Contractor**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
tolerance to disturbance; the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; baseline levels of noise and human activity; and treatment activity. Buffer size may be adjusted if the qualified RPF or biologist determines that such an adjustment would not be likely to adversely affect (i.e., cause mortality, injury, or disturbance to) the species within the nest, den, burrow, or other occupied site. If a no-disturbance buffer is reduced below 100 feet from an occupied site, a qualified RPF or biologist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). ▶ No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified RPF or biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified RPF, biologist, or biological technician will be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in mortality, injury or disturbance to special-status species. ▶ For prescribed burning, the project proponent will implement the treatment outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, the qualified RPF or biologist will determine the period of time within which prescribed burning could occur that will avoid or minimize mortality, injury, or disturbance of the species. The project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate limited operating periods. <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				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
(e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. ▪ If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that special-status wildlife with specific requirements for high canopy cover (e.g., northern goshawk, Sierra Nevada snowshoe hare) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted) such that the habitat function is maintained. ▶ A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding habitat function. A qualified RPF or biologist with knowledge of the special-status wildlife species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status wildlife species' habitat or because the loss of special-status wildlife would substantially reduce the number or restrict the range of a special-status wildlife species. If the project proponent determines the impact on special-status wildlife would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status wildlife or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the non-listed special-status wildlife would benefit from treatment in the occupied habitat area even though some of the non-listed special-status wildlife may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to non-listed special-status wildlife, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 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	**Initial Treatment: Y** **Treatment Maintenance: N**	**Prior to the start of work, and after work, if needed**	**SFI and HCRCD**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 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	**Initial Treatment: N** **Treatment Maintenance: N**	**During work, if needed**	**Contractor**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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-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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work, and during work**	**Contractor**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
▶ To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled). ▶ To the extent feasible, fuel breaks will not remove more than 20 percent of the native vegetation relative cover from a stand of sensitive natural community vegetation in sensitive natural communities with a rarity rank of S3 (vulnerable) or in oak woodlands. In forest and woodland sensitive natural communities with a rarity rank of S3, and in oak woodlands, only shaded fuel breaks will be installed, and they will not be installed in more than 20 percent of the stand of sensitive natural community or oak woodland vegetation (i.e., if the sensitive natural community covers 100 acres, no more than 20 acres will be converted to create the fuel break). ▶ Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/). ▶ Time prescribed herbivory to occur when non-target vegetation is not susceptible to damage (e.g. non-target vegetation is dormant or has completed its reproductive cycle for the year). For example, use herbivores to control invasive plants growing in sensitive habitats or sensitive natural communities when sensitive vegetation is dormant but invasive plants are growing. Timing of herbivory to avoid non-target vegetation will be determined by a qualified botanist, RPF, or biologist based on the specific vegetation alliance being treated, the life forms and life conditions of its characteristic plant species, and the sensitivity of the non-target vegetation to the effects of herbivory. The feasibility of implementing the avoidance measures will be determined by the project proponent based on whether implementation of this mitigation measure will preclude completing the treatment project within the reasonable period of time necessary to meet CalVTP program objectives, including, but not limited to, protection of vulnerable communities. If the avoidance measures are determined by the project proponent to be infeasible, the project proponent will document the reasons implementation of the avoidance strategies are infeasible in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any change in the feasibility of avoidance strategies from those explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). A qualified RPF or botanist with knowledge of the affected sensitive natural community will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the				

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
treatment would be significant under CEQA because implementation of the treatment will not maintain habitat functions of the sensitive natural community or oak woodland. If the project proponent determines the impact on sensitive natural communities or oak woodlands would be less than significant, no further mitigation will be required. If the project proponent determines that the loss or degradation of sensitive natural communities or oak woodlands would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-3b will be implemented. The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the sensitive natural community or oak woodland would benefit from treatment in the occupied habitat area even though some loss may occur during treatment activities. For a treatment to be considered beneficial to a sensitive natural community or oak woodland, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the community (or similar community) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to sensitive natural communities or oak woodlands, no compensatory mitigation will be required.				

Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands
 	
If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under Mitigation Measure BIO-3a, the project proponent will implement the following actions:
 	
▶ Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by:
  ▪ restoring sensitive natural community or oak woodland 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
	Initial Treatment: Y
	
	Treatment Maintenance: N
		Prior to the start of work, and after work, if needed	**SFI and HCRCD**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and: 1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan.				
Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat If, after implementation of SPR BIO-4, impacts to riparian habitat remain significant under CEQA, the project proponent will implement the following: ▶ Compensate for unavoidable losses of riparian habitat acreage and function by: ▪ restoring riparian habitat 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),	**Initial Treatment: Y** **Treatment Maintenance: N**	**Prior to the start of work, and after work, if needed**	**SFI and HCRCD**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity. 2. For restoring or enhancing riparian habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., Lake and Streambed Alteration Agreement), if these requirements are equally or more effective than the mitigation identified above.				
Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands Impacts to wetlands will be avoided using the following measures: ▶ The qualified RPF or biologist will delineate the boundaries of federally protected wetlands according to methods established in the USACE wetlands delineation manual (Environmental Laboratory 1987) and the appropriate regional supplement for the ecoregion in which the treatment is being implemented. ▶ The qualified RPF or biologist will delineate the boundaries of wetlands that may not meet the definition of waters of the United States, but would qualify as waters of the state, according to the state wetland procedures (California Water Boards 2019 or current procedures). ▶ A qualified RPF or biologist will establish a buffer around wetlands and mark the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). The buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified RPF or biologist and will depend on the type of wetland present (e.g., seasonal wetland, wet meadow, freshwater marsh, vernal pool), the timing of treatment (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species'	**Initial Treatment: Y** **Treatment Maintenance: Y**	**Prior to the start of work**	**Contractor**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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 to stop any treatment activities that could result in potential adverse effects to special-status species.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During Work, if needed**	**Contractor**	**SFI and HCRCD**

Mitigation Measures	Applicable? (Y/N)	Timing	Implementing Entity	Verifying/Monitoring Entity
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.	**Initial Treatment: Y** **Treatment Maintenance: Y**	**During work**	**Contractor**	**SFI and 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 Cortese List to identify any known contamination sites within the project site. If a proposed	**Initial Treatment: Y** **Treatment Maintenance: N**	**Prior to the start of work**	**Contractor, SFI and HCRCD, CAL FIRE**	**Contractor, SFI and HCRCD, CAL FIRE**

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

ATTACHMENT B – BIOLOGICAL RESOURCES REPORT

ATTACHMENT C – ARCHAEOLOGICAL SURVEY REPORT

Technical Report

BIOLOGICAL RESOURCES REPORT

Vanauken Creek Fuel Break Project

Whitethorn, California

September 2025

Prepared for:

Sanctuary Forest Inc.
in cooperation with
Humboldt County Resource Conservation District and the State Coastal Conservancy
315 Shelter Cove Road
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Acronyms and Abbreviations

BGEPA	Bald and Golden Eagle Protection Act
BMPs	best management practices
CAL FIRE	California Department of Forestry and Fire Protection
CalVTP	California Vegetation Treatment Program
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
County	County of San Mateo
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPS	distinct population segment
EFH	Essential Fish Habitat
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
FE	Federally Endangered
F&G	Fish and Game
FESA	Federal Endangered Species Act
FT	Federally Threatened
FMP	Fishery management plan
FR	Federal Register
FRAP	Fire and Resource Assessment Program
HRCD	Humboldt Resource Conservation District
HSA	hydrologic sub-area
IPaC	Information for Planning and Conservation
MBTA	Migratory Bird Treaty Act
MCV	California Manual of Vegetation
MM	mitigation measure
Montrose	Montrose Environmental
MSA	Magnuson-Stevens Fishery Conservation and Management Act
msl	mean sea level
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
OHW	ordinary high water
PEIR	Program Environmental Impact Report
Project	Vanauken Creek Fuel Break Project
PSA	Project Specific Analysis
RWQCB	Regional Water Quality Control Board
SCC	State Coastal Conservancy
SFI	Sanctuary Forest Inc.

SPR	standard project requirement
SWRCB	State Water Resources Control Board
USEPA	U.S. Environmental Project Agency
USC	U.S. Code
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
°F	degrees Fahrenheit
USGS	U.S. Geological Survey
VegCAMP	Vegetation Classification and Mapping Program
WDR	Water discharge requirement
WQC	Water quality certificate

1 Introduction

Sanctuary Forest Inc. (SFI) in cooperation with the Humboldt Resource Conservation District (HRCD) and the State Coastal Conservancy (SCC) is proposing the Vanauken Creek Fuel Break Project (Project) in southern Humboldt County, California. This Biological Resources Report has been prepared to support preparation of a Project-Specific Analysis (PSA) to the California Vegetation Treatment Program (CalVTP) Programmatic Environmental Impact Report (PEIR). Consistent with standard project requirement (SPR) BIO-1 (Review and Survey Project-Specific Biological Resources), this report provides results of reconnaissance-level surveys completed for the treatment area and assesses the potential for protected and/or sensitive biological resources to occur within the Project area or be impacted by Project activities. A list of biological resource SPRs and mitigation measures (MMs) applicable to the proposed Project is also provided.

1.1 Project Overview

The main objective of the Project is to safeguard the rural community of Whitethorn from wind-driven wildfires by establishing three shaded fuel breaks equaling approximately 171-acres that would reduce the amount and continuity of hazardous fuels, and up to an additional 426 acres that would be subject to burn preparation/fire hazard reduction, prescribed burn, and reentry. The Project, covering a total of 597 acres, would focus on the unincorporated community of Whitethorn, a high-risk wildfire area classified entirely within the "High" Fire Hazard Severity Zone. It is also located within the Wildland-Urban Interface zone, as designated by the California Department of Forestry and Fire Protection (CAL FIRE) in its 2024 mapping (CAL FIRE 2024). CAL FIRE has identified the area as a Priority Landscape in its Reducing Wildfire Threats to Communities mapper.

The Project would design and implement measures that create protective buffers around homes, shielding them from wildfires that may start in timberlands, while also protecting timber resources and ecological values from fires that could originate in nearby developed areas or along roads. Project implementation would not stop fire spread during periods of strong, warm, downslope winds with low relative humidity (i.e., Foehn winds) when pieces of burning material can blow across fuel breaks. However, the Project would provide points from which firefighting resources can "anchor" to conduct suppression activities, and it would increase the construction rate of firelines while simultaneously reducing the amount of air-delivered fire retardant required to coat vegetation effectively. Slowing the spread of wildfire would provide additional time for an effective community evacuation and lessen the impact on suppression resources.

The Project would reduce the risk of catastrophic wildfire and improve forest health, and community safety by implementing a series of shaded fuel breaks and conducing larger scale forest thinning and prescribed burning. Biological diversity in the area would be improved by promoting conditions that favor native plant and animal species. Forest health would be improved through enhancing native, fire-resilient plant communities primarily through ladder fuel and weed removal, opening space for native plants to return. Healthy, mature trees and scrub dominating the canopy would be thinned out and retained, reducing new brush and understory growth while preserving the carbon sequestration function. Biomass would be reduced in open grassy areas to increase the availability of 'edge habitat' for forage for wildlife.

SPRs of the CalVTP will be implemented as part of the Project. Per SPR HYD-4 (Identify and Protect Watercourse and Lake Protection Zones), mechanical treatments would avoid state or federally jurisdictional waters and riparian habitat by a minimum of 50 to 100 feet. However riparian non-

mechanical (manual) thinning of riparian vegetation (using hand crews) would be conducted within the 50-foot exclusion zone from state or federally jurisdictional waters and riparian habitat to reduce stems per acre and shift species composition toward more deciduous tree species, reduce the risk of wildfire, improve forest health, and increase streamflow.

1.2 Location and Study Area

The Project will occur in the vicinity of Whitethorn in Humboldt County in California (Figures 1 and 2). It falls within the Northern California Coast Ecological Section (263A) per the California Vegetation Treatment Program Final Program Environmental Impact Report (PEIR).

This report focuses on a 597-acre area that includes permanent and temporary impact areas. The area where treatment activities will occur is herein called the "Study Area." Approximate coordinates for the center point of the Study Area are 40.061794, -123.948546, located in the Briceland U.S. Geological Survey (USGS) 7.5-minute quadrangle.

Figure 1. Project Vicinity

Figure 2. Project Location

2 Regulatory Setting

2.1 Federal Laws, Regulations, and Standards

2.1.1 Endangered Species Act of 1973

The federal Endangered Species Act (FESA) protects listed wildlife species from harm or "take," which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that directly results in death or injury of a listed animal species. An activity can be defined as take even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under the FESA only if they occur on federal lands or if the project requires a federal action, such as a CWA Section 404 fill permit from the U.S. Army Corps of Engineers (USACE). The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) share responsibility for implementing the FESA. In general, USFWS manages terrestrial and freshwater species, whereas NMFS manages marine and anadromous species. If take of a federally listed animal species would occur, incidental take approval would be required through either Section 7 or Section 10 consultation with USFWS or NMFS, as applicable.

2.1.2 Magnuson-Stevens Fishery Conservation and Management Act (Sustainable Fisheries Act)

The Magnuson-Stevens Fishery Conservation and Management Act (16 USC Section 1801 et seq.) governs all fishery management activities that occur in federal waters within the United States' 200-nautical-mile limit. The Act establishes eight Regional Fishery Management Councils responsible for the preparation of fishery management plans (FMPs) to achieve the optimum yield from U.S. fisheries in their regions. These councils, with assistance from NMFS, establish Essential Fish Habitat (EFH) in Fishery Management Plans (FMPs) for all managed species. Federal agencies that fund, permit, or implement activities that may adversely affect EFH are required to consult with the NMFS regarding potential adverse effects of their actions on EFH, and respond in writing to recommendations by the NMFS.

2.1.3 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA; 16 U.S. Code [USC] Section 703, Supp. I, 1989) prohibits the killing, capture, possession, or trading of any migratory bird, migratory bird part, or their nests or eggs, except in accordance with regulations prescribed by the Secretary of the Interior. The trustee agency that addresses issues related to the MBTA is USFWS. Migratory birds protected under this law include those species that are native to the U.S. and its territories. The MBTA protects active nests from destruction. An active nest under the MBTA, as described by the U.S. Department of the Interior in its April 16, 2003, Migratory Bird Permit Memorandum, is one having eggs or young. Nest starts, prior to egg laying, are not protected from destruction.

2.1.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA)(16 USC Section 668 et seq.) makes it unlawful to import, export, take, possess, sell, purchase, barter, or transport any bald eagle or golden eagle, or their parts, products, nests, or eggs. Take includes pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbance. Regulations further define "disturb" as "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." The trustee agency that addresses issues related to the BGEPA is USFWS. Exceptions may be granted by USFWS for scientific or exhibition use, or for traditional and cultural use by Native Americans. Additionally, the USFWS may issue eagle disturbance take permits under certain circumstances for activities that may result in the take of eagles by disturbance.

2.1.5 Clean Water Act

Areas meeting the regulatory definition of "waters of the United States" (jurisdictional waters) are subject to the jurisdiction of USACE under provisions of the 1972 Clean Water Act (Federal Water Pollution Control Act) (CWA). The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters. Areas typically not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial waterbodies, such as swimming pools, and water-filled depressions (33 CFR Part 328).

Section 404 Permits for Discharges of Fill in Waters and Wetlands

CWA Section 404 regulates the discharge of dredged and fill materials into waters of the U.S. Construction activities involving placement of fill into jurisdictional waters of the U.S. are regulated by USACE through permit requirements. A water quality certification under CWA Section 401 is required before the USACE can issue a Section 404 permit.

Section 401 Water Quality Certification

Section 401 of the CWA requires an evaluation of water quality when a proposed activity requiring a federal license or permit could result in a discharge to waters of the U.S. In California, the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) issue water quality certifications. Section 401 of the CWA directly grants authority from the U.S. Environmental Protection Agency (USEPA) to the State, whose RWQCBs are charged with implementing Section 401 compliance consistent with its water quality control plan (also known as a Basin Plan) to maintain an efficient process, consistent with USEPA requirements. Applicants for a federal license or permit to conduct activities that might result in the discharge to waters of the U.S. (including wetlands) must also obtain a Section 401 water quality certification to ensure that any such discharge complies with the applicable CWA provisions.

2.2 State Agencies, Laws, and Programs

2.2.1 Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) works in coordination with the nine RWQCBs to preserve, protect, enhance, and restore water quality. Each RWQCB makes decisions related to water quality for its region, and may approve, with or without conditions, or deny projects that could affect waters of the state. Their authority comes from the CWA and the State's Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The Porter-Cologne Act broadly defines waters of the state as "any surface water or groundwater, including saline waters, within the boundaries of the state." Because the Porter-Cologne Act applies to any water, whereas the CWA applies only to certain waters, California's jurisdictional reach overlaps and may exceed the boundaries of waters U.S. For example, Water Quality Order No. 2004-0004-DWQ states that shallow waters of the state include headwaters, wetlands, and riparian areas. Where riparian habitat is not present, such as may be the case at headwaters, jurisdiction is taken to the top of bank.

On April 2, 2019, the SWRCB adopted the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. In these new guidelines, riparian habitats are not specifically described as waters of the state but instead as important buffer habitats to streams that do conform to the State Wetland Definition. The Procedures describe riparian habitat buffers as important resources that may both be included in required mitigation packages for permits for impacts to waters of the state, as well as areas requiring permit authorization from the RWQCBs to impact.

Pursuant to the CWA, and as described above, projects that are regulated by the USACE must obtain a Section 401 water quality certificate (WQC) permit from the RWQCB. This WQC ensures that the Proposed Project will uphold state water quality standards. Because California's jurisdiction to regulate its water resources is much broader than that of the federal government, proposed impacts on waters of the state require WQC even if the area occurs outside of USACE jurisdiction. Moreover, the RWQCB may impose mitigation requirements even if the USACE does not, for example for riparian habitats which are buffers to waters of the state. Under the Porter-Cologne Act, the SWRCB and the nine RWQCBs also have the responsibility of granting CWA National Pollutant Discharge Elimination System (NPDES) permits and waste discharge requirements (WDRs) for certain point-source and non-point discharges to waters.

2.2.2 California Fish and Game Code

Section 1600 et seq. (Lake and Streambed Alteration)

California Department of Fish and Wildlife (CDFW) exerts jurisdiction over the bed and banks of rivers, lakes, and streams according to provisions of Sections 1601–1603 of the Fish and Game (F&G) Code. The F&G Code requires a Streambed Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or water body and for the removal of riparian vegetation.

Sections 1900-1913 (California Native Plant Protection Act)

The Native Plant Protection Act (NPPA) (F&G Code Section 1900 et seq.) allows the Fish and Game Commission to designate plants as rare or endangered. The official list of designated rare or endangered plants is contained in the California Code of Regulations, Title 14, Section 670.2. The NPPA prohibits take of endangered or rare native plants, with some exceptions for agricultural and

nursery operations, emergencies, or after properly notifying CDFW for vegetation removal from canals, roads, utility right-of-way, or other specified situation under Section 1913.

Sections 2050-2098 (California Endangered Species Act)

The California Endangered Species Act (CESA) (F&G Code, Chapter 1.5, Sections 2050-2116) prohibits the take of any plant or animal species designated by the California Fish and Game Commission as threatened, endangered, or a candidate for listing as threatened or endangered. In accordance with the CESA, CDFW has jurisdiction over state-listed species. CDFW regulates activities that may result in "take" of individuals listed under the Act (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not expressly included in the definition of "take" under the F&G Code. CDFW has interpreted "take" to include the "killing of a member of a species which is the proximate result of habitat modification." If project activities would result in take of a state listed or candidate species, an incidental take permit would be required through Section 2081 consultation with the CDFW.

Sections 3503, 3503.5, and 3513 (Nesting Bird Protections)

F&G Code Sections 3503, 3513, and 3800 (and other sections and subsections) protect native birds, including their nests and eggs, from all forms of take. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by CDFW. Raptors (i.e., eagles, falcons, hawks, and owls) and their nests are specifically protected in California under F&G Code Section 3503.5. Section 3503.5 states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

Sections 3511, 4700, 5050, and 5515 (Fully Protected Species)

Sections 3511, 4700, 5050, and 5515 of the F&G Code identify species that are fully protected from all forms of take. Section 3511 lists fully protected birds; Section 4700 lists fully protected mammals; Section 5050 lists fully protected amphibians; and Section 5515 lists fully protected fish.

2.2.3 California Environmental Quality Act

The California Environmental Quality Act (CEQA) and CEQA Guidelines provide guidance in evaluating impacts of projects to biological resources and determining which impacts would be significant. CEQA defines "significant effect on the environment" as "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project." Under CEQA Guidelines Section 15065, a project's effects on biotic resources are deemed significant where the project would:

- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels;
- threaten to eliminate a plant or animal community; or
- reduce the number or restrict the range of a rare or endangered plant or animal.

CDFW maintains lists of vertebrate species designated as "species of special concern." Species of special concern is an administrative term with no formal legal status but serves to focus attention on animals determined to be at conservation risk. Species of special concern fall under the category of

potentially rare or sensitive species and are considered for environmental review in accordance with CEQA Guidelines Section 15380(b).

CDFW works cooperatively with the California Native Plant Society (CNPS), a non-governmental conservation organization, to review and rank rare plant species in California through the California Rare Plant Rank (CRPR) system. Plants with a CRPR rank of 1 or 2 are generally considered to meet the CEQA Guidelines Section 15380 criteria, although plant with a CRPR rank of 3 or 4 may also meet criteria in if they are considered locally rare.

Natural communities with rank of S1 through S3 on the current list of Natural Communities maintained by CDFW's Vegetation Classification and Mapping Program (VegCAMP) are generally considered to meet the CEQA Guidelines criteria for sensitive natural communities under CEQA.

2.3 Local and Regional Laws and Plans

When state agencies, including CAL FIRE, are conducting governmental activities under the authority of state law or the State Constitution, in this case, treatments implemented under the CalVTP, they are exempt from local government plans, policies, and ordinances (unless a constitutional provision or statute directs otherwise). Nonetheless, CAL FIRE voluntarily seeks to operate consistently with local governance to the extent feasible.

2.3.1 Humboldt County General Plan

Under the Humbolt County General Plan (Humboldt County 2017) the Study Area is mapped under the Land Use Designation of Timberland and is zoned Timberland Production Zone. Additionally, many of the streams and creeks within the Study Area are mapped as Streamside Management Areas. Relevant policies from the Land Use, and Conservation and Open Space, and Water Resources elements of the Humbolt County General Plan are listed below

> **Policy FR-P20**. Fire Safety Hazards. The County shall continue to implement the State Responsibility Area Fire Safe Standards and Wildland-Urban Interface Building Codes for new development and support voluntary programs for fuels reduction, dwelling fire protection and creation of defensible space for existing development.
>
> **Policy BR-P2. Critical Habitat.** Discretionary projects which use federal permits or federal funds on private lands that have the potential to impact critical habitat shall be conditioned to avoid significant habitat modification or destruction consistent with federally adopted Habitat Recovery Plans or interim recovery strategies.
>
> **Policy BR-P9. Oak Woodlands.** Oak woodlands shall be conserved through the review and conditioning of discretionary projects to minimize avoidable impacts to functional capacity and aesthetics, consistent with state law.
>
> **Policy BR-P10. Invasive Plant Species.** The County shall cooperate with public and private efforts to manage and control noxious and exotic invasive plant species. The County shall recommend measures to minimize the introduction of noxious and exotic invasive plant species in landscaping, grading and major vegetation clearing activities.
>
> **Policy BR-S6. Development within Stream Channels.** Development within stream channels may be approved where consistent with Policy BR-P4, Development within Stream Channels, and is limited to the following projects.
>
> A. Fishery, wildlife, and aquaculture enhancement and restoration projects.

B. Road crossings consistent with Standard BR-S9, Erosion Control, of this section.

C. Flood control and drainage channels, levees, dikes, and floodgates.

D. Mineral extraction consistent with other County regulations.

E. Small-scale hydroelectric power plants in compliance with applicable County regulations and those of other agencies.

F. Wells and spring boxes, and agricultural diversions.

G. New fencing, so long as it would not impede the natural drainage or wildlife movement and would not adversely affect the stream environment or wildlife movement.

H. Bank protection, provided it is the least environmentally damaging alternative.

I. Other essential projects, including municipal groundwater pumping stations, provided they are the least environmentally damaging alternative, or necessary for the protection of the public's health and safety.

Policy BR-S7. Development within Streamside Management Areas. Development within Streamside Management Areas may be approved where consistent with Policy BR-P6, Development within Streamside Management Areas, and shall be limited to the following uses:

A. Development permitted within stream channels per BR-S6, Development within Stream Channels.

B. Timber management and harvest activities under a timber harvesting plan or non-industrial timber management plan, or activities exempt from local regulation as per California Public Resources Code 4516.5(d).

C. Road, bridge, and trail replacement or construction, when it can be demonstrated that it would not degrade fish and wildlife resources or water quality, and that vegetative clearing is kept to a minimum.

D. Removal of vegetation for disease control or public safety purposes.

E. Normal, usual and historical agricultural practices and uses which are principally permitted within the SMA shall not be considered development for the purposes of this standard.

F. Normal, usual and historical agricultural and surface mining practices and uses which are principally permitted within the SMA shall not be considered development for the purposes of this standard.

Policy BR-S8. Required Mitigation Measures. Mitigation measures for development within Streamside Management Areas shall, at a minimum, include:

A. Retaining snags unless felling is required by CAL-OSHA, by CAL FIRE forest and fire protection regulations or for public health and safety reasons. The felling must be approved by the Planning Director. Felled snags shall be left on the ground if consistent with fire protection regulations and the required treatment of slash or fuels.

B. Retain live trees with visible evidence of current or historical use as nesting sites by hawks, owls, eagles, osprey, herons, kites or egrets.

C. Erosion control measures (as per Standard BR-S9- Erosion Control).

D. Maximum feasible retention of overstory canopy in riparian corridors.

Policy BR-S9. Erosion Control. Erosion control measures for development within Streamside Management Areas shall include the following:

A. During construction, land clearing and vegetation removal will be minimized, following the provisions of the Water Resources Element and the standards listed here.

Policy WR-P36. Natural Stormwater Drainage Courses. Natural drainage courses, including ephemeral streams, shall be retained and protected from development impacts which would alter the natural drainage courses, increase erosion or sedimentation, or have a significant adverse effect on flow rates or water quality. Natural vegetation within riparian and wetland protection zones shall be maintained to preserve natural drainage characteristics consistent with the Biological Resource policies. Stormwater discharges from outfalls, culverts, gutters, and other drainage control facilities that discharge into natural drainage courses shall be dissipated so that they make no significant contribution to additional erosion and, where feasible, are filtered and cleaned of pollutants.

Policy WR-P42. Erosion and Sediment Control Measures. Incorporate appropriate erosion and sediment control measures into development design and improvements.

3 Environmental Setting

3.1.1 Land Use and Regional Context

The Study Area encompasses an approximately 597-acre area located east of the intersection of Briceland Road and Shelter Cove Road in Thorn Junction, in a rural area along the northern California coast. The proposed Project treatment area is located approximately 6.5 miles east of the community of Shelter Cove and the Pacific Ocean, and 8 miles west of the City of Garberville The proposed Project treatment area is located on privately owned properties with conservation easements (owned and managed by the Sanctuary Forest Incorporation and the Northcoast Regional Land Trust), situated in the Coast Ranges in northern California, in southern Humboldt County. The Study Area is zoned Timberland Production Zone. Beyond the Study Area most of the land is undeveloped and zoned Timberland Production Zone and Unclassified.

3.1.2 Watershed and Topography

The Study Area falls within the Klamath-Northern California Coastal USGS Hydrologic Region, which covers numerous watersheds that drain directly into the Pacific Ocean. The Study Area is within the Headwaters Mattole River Watershed (180101070202). The Headwaters Mattole River Watershed drains an area of 304 square miles in the northern California Coast Range Mountains. Seventy-four tributaries feed the 62-mile un-dammed stretch of the Mattole River, originating in northern Mendocino County and draining to the Pacific Ocean. (Mattole Restoration Council 2023).

Elevations in the Study Area range from approximately 1,000 to 1,604 feet above mean sea level. Vanauken Creek, which drains northeast to southwest into the Mattole River, runs through portions the Study Area. Several unnamed tributaries of Vanauken Creek as well as unnamed tributaries to McKee Creek, run through the Study Area. McKee Creek itself it located outside of the Study Area and drains north to south into the Mattole River.

3.1.3 Climate

The Study Area has a Mediterranean climate characterized by cool, wet winters and hot, dry summers. Average temperatures range from a low of 48.3 degrees Fahrenheit (°F) in December to a high of 62°F in September (NOAA 2025). Average annual precipitation is approximately 40.4 inches, with a majority of precipitation occurring from October through April (NOAA 2025).

3.1.4 Soils

Five soil types are present within the Study Area (NRCS 2025b). These soil mapping units are listed in **Table 1**; **Figure 3** shows the soils mapped in the study area. Due to the dispersed nature of the Study Area, only soils within 50 feet of the individual project sites were included in the table below. Two soil types mapped within the Study Area were included on the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) list of Hydric Soils (NRCS 2025a). Serpentine soils are not present in the Study Area (NRCS 2025b).

Table 1. NRCS Soil Types Mapped in the Study Area

Map Unit Symbol	Map Unit Name	Map Unit Details	Hydric Soil
182	Gschwend-Frenchman complex	0 to 9 percent slopes	Yes
573	Sproulish-Canoecreek Redwohly complex	15 to 30 percent slopes, warm	No
577	Redwohly-Gibsoncreek-Sproulish complex	15 to 30 percent slopes	No
578	Sproulish-Telegraph-Redwohly complex	30 to 50 percent slopes	No
579	Sproulish-Gibsoncreek-Redwohly complex	50 to 75 percent slopes	No

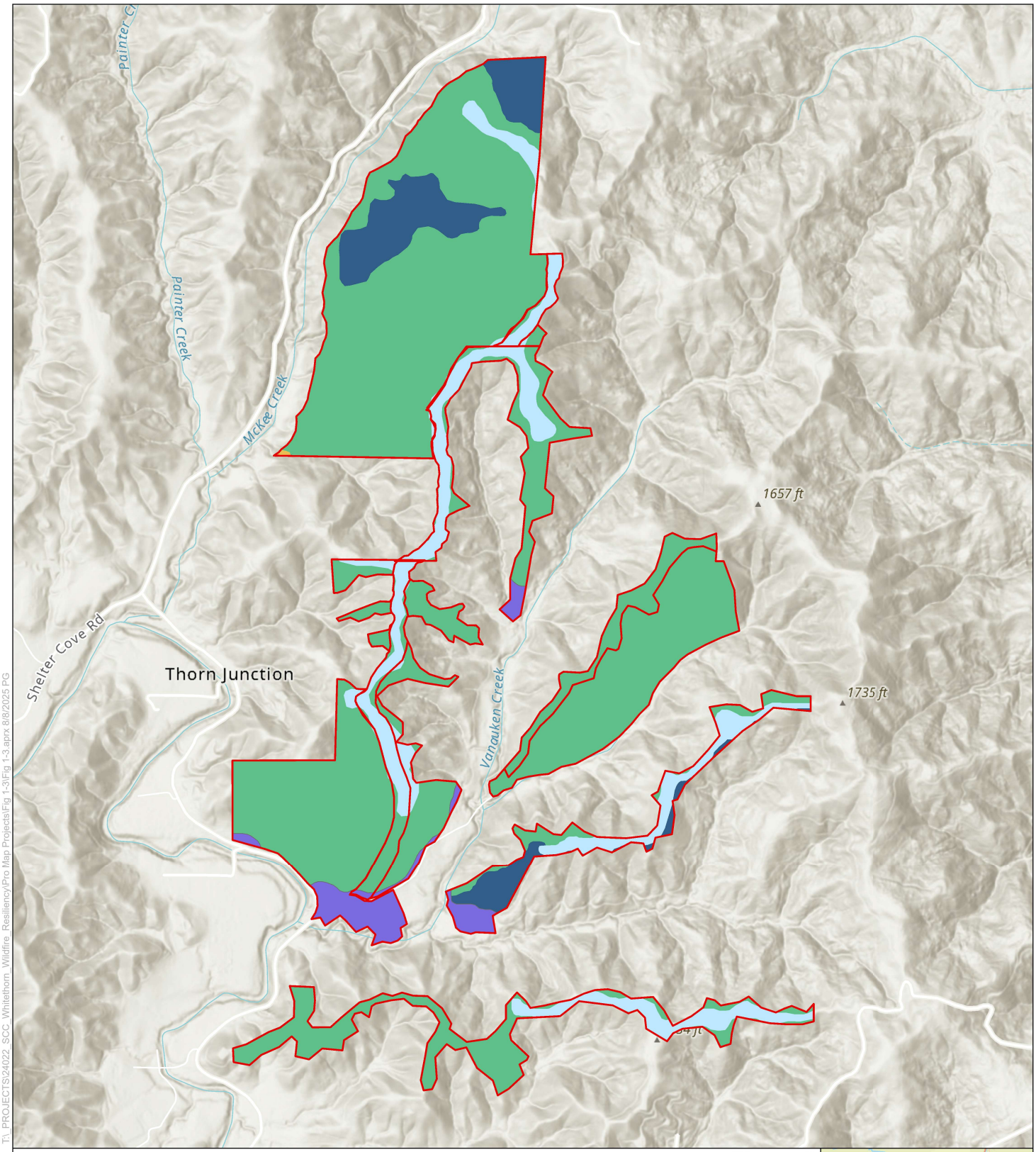

Figure 3
NRCS Soil Map

MONTROSE ENVIRONMENTAL

Vanauken Creek Fuel Break Project

Data Source: ESRI 2025; NRCS Soil Data September 2021

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4 Existing Biological Resources

4.1 Inventory Methods

Baseline biological resources in the Study Area were evaluated by reviewing pertinent literature and database queries and conducting a field survey to supplement background information with site-specific data. The methods are described below.

4.1.1 Literature and Database Review

Biological resource information in the Study Area was evaluated by reviewing the following data sources:

- U.S. Fish and Wildlife Service (USFWS), Information for Planning and Conservation (IPaC) list of federally endangered and threatened species (USFWS 2025b);
- USFWS's Critical Habitat Portal (USFWS 2025a);
- National Marine Fisheries Service (NMFS) Species and Habitat mapping application (NMFS 2025b);
- National Wetland Inventory (NWI) results (USFWS 2025c);
- West Coast managed species list (NMFS 2025a);
- A query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) for special-status species occurrence records within five miles of the Study Area (CDFW 2025a);
- A query of the California Department of Fish and Wildlife (CDFW) Spotted Owl Observations Database for occurrence records within five miles of the Study Area (CDFW 2025d);
- A query of the California Native Plant Society (CNPS) Inventory or Rare and Endangered Plants for special-status plant species records within the 8 USGS 7.5-minute quadrangles surrounding and encompassing the Study Area: Garberville, Ettersburg, Honeydew, Miranda, Bear Harbor, Piercy, Shelter Cove and Briceland (CNPS 2025);
- California Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program (FRAP) California Vegetation by Wildlife Habitat Relationship Type (CAL FIRE 2022);
- eBird records from the Study Area vicinity (Cornell Lab of Ornithology 2025); and
- Aerial photography (Google Earth 2025).

Results of the IPaC, CNDDB, and CNPS queries are provided in **Appendix A.** Mapped location of CNDDB occurrence records within 5 miles of the Study Area for special-status plant and special-status wildlife are shown in **Figure 4** and **Figure 5**, respectively. Mapped USFWS and NMFS Critical Habitat is shown in **Figure 6**.

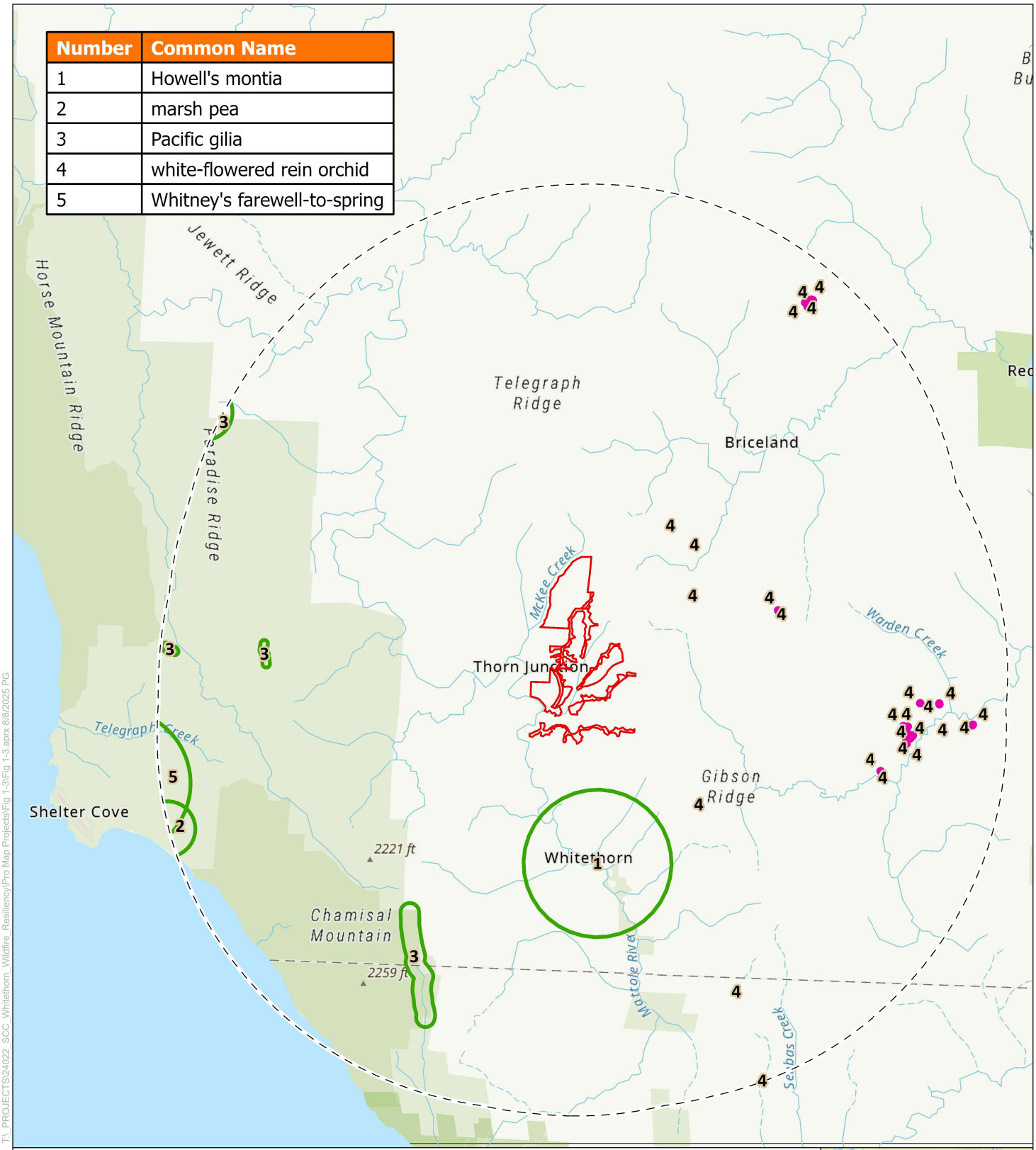

Figure 4
Special-Status Plant Species within a 5 mile radius of Project Area

Vanauken Creek Fuel Break Project

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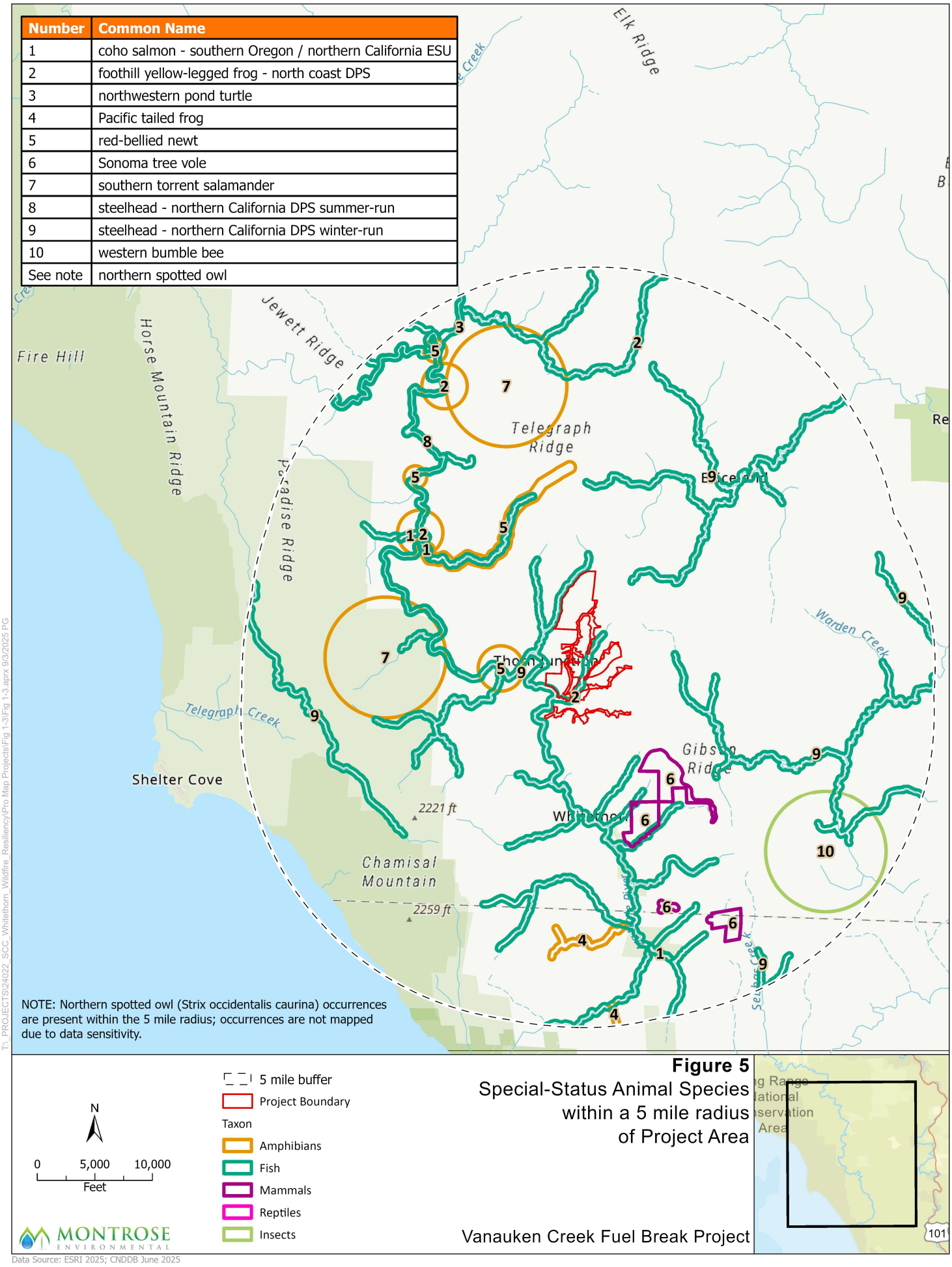
Number | Common Name
1 | coho salmon - southern Oregon / northern California ESU
2 | foothill yellow-legged frog - north coast DPS
3 | northwestern pond turtle
4 | Pacific tailed frog
5 | red-bellied newt
6 | Sonoma tree vole
7 | southern torrent salamander
8 | steelhead - northern California DPS summer-run
9 | steelhead - northern California DPS winter-run
10 | western bumble bee
See note | northern spotted owl
Elk Ridge
Jewett Ridge
Fire Hill
Horse Mountain Ridge
Paradise Ridge
Telegraph Ridge
Telegraph Creek
Warden Creek
Shelter Cove
2221 ft
Chamisal Mountain
2259 ft
NOTE: Northern spotted owl (Strix occidentalis caurina) occurrences are present within the 5 mile radius; occurrences are not mapped due to data sensitivity.
5 mile buffer
Project Boundary
Taxon
Amphibians
Fish
Mammals
Reptiles
Insects
N
0
5,000
10,000
Feet
MONTROSE ENVIRONMENTAL
Figure 5
Special-Status Animal Species within a 5 mile radius of Project Area
Vanauken Creek Fuel Break Project
101
Data Source: ESRI 2025; CNDDB June 2025
T:_PROJECTS\24022_SCC_Whitethorn_Wildfire_Resiliency\Pro Map Projects\Fig 1-3\Fig 1-3.aprx 9/3/2025 PG

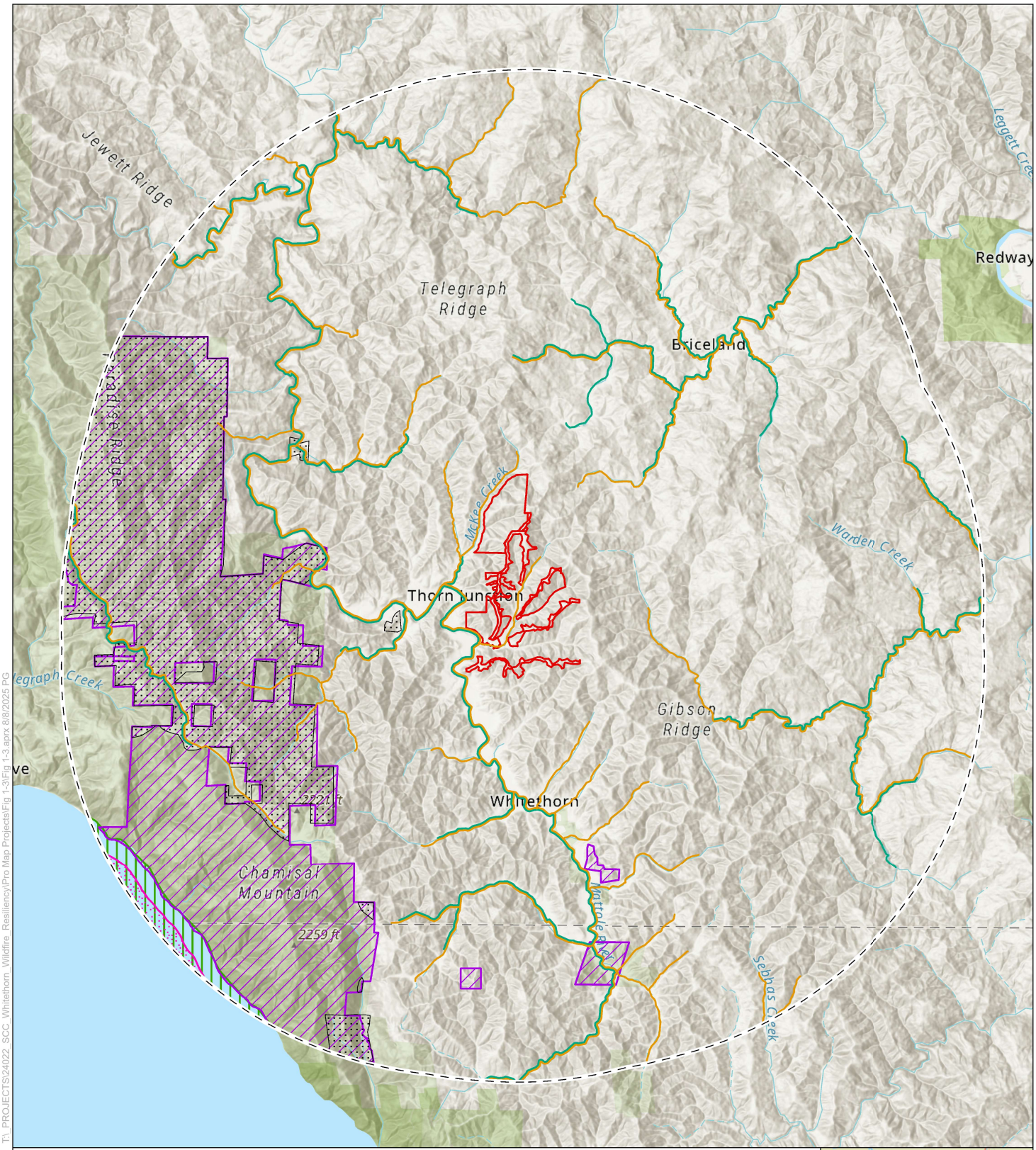

Figure 6
USFWS and NMFS Critical Habitat within 5 mile radius of Project Area

Vanauken Creek Fuel Break Project

MONTROSE ENVIRONMENTAL

Data Source: USFWS Critical Habitat, June 13 2025; NMFS Critical Habitat, July 17 2025; ESRI 2025

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Figure 7
CAL FIRE FRAP
California Vegetation

MONTROSE ENVIRONMENTAL

Vanauken Creek Fuel Break Project

Data Source: ESRI 2025; CAL FIRE FRAP fveg22_1.

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4.1.2 Field Survey

Montrose Environmental (Montrose) biologists Jessica Gonzalez and Susannah Kiteck conducted a biological reconnaissance survey on July 15 and 16, 2025. The survey effort consisted of a visual assessment of site conditions. Maps of baseline biological resources including a regional aerial photographic overview of the Study Area and detailed aerial photography were used in the survey.

Surveys were conducted in the field on-foot. Natural and anthropogenic features, land cover types, and the presence of common and special-status species were noted. Visual aids, such as binoculars, were used to better assess habitat and wildlife species when appropriate. Photographs of the Study Area are included under **Appendix B.** Steep slopes, dense vegetation and a lack of access roads were limiting factors when conducting the field survey. In addition, due to the Study Area size, priority areas were identified prior to the field survey; priority areas included all proposed shaded fuel breaks.

For consistency with the CalVTP PEIR, habitat and vegetation types were identified using data modeled by the CAL FIRE Fire and Resource Assessment Program (FRAP) and verified or corrected by field observations during the biological reconnaissance survey. Vegetated areas are further classified to alliance level according to the California Manual of Vegetation (MCV) online edition (CNPS 2025), which is the standard classification system used by the CDFW VegCAMP. State rarity ranks for MCV Alliances in the Study Area were obtained from CDFW VegCAMP's California Natural Communities List (CDFW 2025c).

4.2 Land Cover and Habitats

Four general land cover and habitat types occur within the Study Area: annual grassland, Douglas fir, montane hardwood (Figure 7), and intermittent stream. Table 2 summarizes the habitat types within the Study Area and, where applicable, provides the corresponding MCV alliance classifications and State Rarity Rank (Sawyer et al. 2009; vegetation.cnps.org). Detailed descriptions are provided in the following subsections. Natural communities with a state rarity rank of 1-3 are considered Sensitive Natural Communities by the CDFW.

Table 2. Land Cover and Habitats

General Description	MCV Alliance	State Rarity Rank[1]
Annual Grassland	*Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance	N/A
Douglas Fir	*Pseudotsuga menziesii* - (*Notholithocarpus densiflorus* - *Arbutus menziesii*) Forest & Woodland Alliance	S4
Montane Hardwood	*Notholithocarpus densiflorus* Forest Alliance	S3
Riparian Forest	*Alnus rubra* Forest Alliance *Alnus rhombifolia* Forest and Woodland Alliance	S4 S4
Intermittent Stream	N/A	N/A

[1] S1–S3 are considered Sensitive Natural Communities

4.2.1 Aquatic

Aquatic habitat within the Study Area is limited to riverine habitat, such as Vanauken Creek, several unnamed tributaries to Vanauken Creek, and an unnamed tributary to McKee Creek. The National Wetlands Inventory (NWI) mapper categorizes these features as riverine, intermittent streambeds that are either seasonally or temporarily flooded (USFWS 2025c). Additionally, some ephemeral drainage features not mapped on the NWI were observed during the biological reconnaissance survey. Riverine habitats within the Study Area are further discussed below.

Riverine

Riverine habitat includes the riparian and deepwater areas contained within a channel, not including wetlands dominated by trees, shrubs, or persistent emergent species, or brackish water that exceeds 0.5 part per thousand (Federal Geographic Data Committee 2013). Riverine habitats within the Study Area are generally devoid of vegetation in the center of the channel with dense herbaceous growth along the channel margins.

This includes Vanauken Creek and several unnamed tributaries of Vanauken Creek, and an unnamed tributary of McKee Creek, which are classified as intermittent streams. Intermittent streams contain flowing water for part of the year. When water is not flowing, generally occurring during the dry season, surface water may not be present or may remain in isolated pools (Federal Geographic Data Committee 2013). During the biological reconnaissance survey in July 2025, biologists did observe water flow in Vanauken Creek and one of its tributaries. Intermittent stream does not have an associated MCV classification and is not considered a sensitive natural community but, as a State and Federal waterway, is a protected biological resource (see Section 4.3).

Additionally, some ephemeral drainage features were observed during the biological reconnaissance survey. Ephemeral water features contain flowing water during or directly after rain events or as a result of snowmelt (Williamson et al. 2015). Due to the steep topography of the area, many of these drainage features were observed occurring within the natural erosion on steep slopes.

4.2.2 Terrestrial

Terrestrial habitats present in the Study Area include annual grassland, Douglas fir, and montane hardwood. Vegetation descriptions are based on *A Guide to Wildlife Habitat of California* (CDFW 2025b). Terrestrial habitats in the Study Area are described below.

Annual Grassland

Annual grassland habitat is comprised predominantly of annual plant species in generally open areas. Wild oats (*Avena* ssp.), soft chess (*Bromus hordeaceus*), ripgut grass (*Bromus diandrus*), red brome (*Bromus rubens*), wild barley (*Festuca myuros* ssp.) and rattail sixweeks grass (*Festuca myuros*) are introduced annual plant species that have become dominant in annual grassland habitat. Species composition is influenced by weather and precipitation. Due to greater levels of precipitation, perennial grasses such as purple needle grass (*Stipa pulchra*) and Idaho fescue (*Festuca idahoensis*) are more commonly found in northern annual grassland habitat as found in the Study Area. Common forbs include, but are not limited to, broadleaf filaree (*Erodium botrys*), turkey-mullein (*Croton setiger*), California bur clover (*Medicago polymorpha*) and popcorn flower (*Plagiobothrys* ssp.). A wide variety of wildlife species use annual grassland habitat such as western fence lizard (*Sceloporus occidentalis),* common garter snake (*Thamnophis sirtalis*), black-tailed jackrabbit (*Lepus californicus*) and California ground squirrel (*Otospermophilus beecheyi*).

Additionally, many bird species use annual grassland as breeding habitat. Raptors including American kestrel (*Falco sparverius*) and northern harrier (*Circus hudsonius*) forage in grassland habitat.

The majority of annual grassland within the Study Area is located in a small meadow (less than one acre) in the southern portion of the Study Area. The meadow is bordered by common manzanita (*Arctostaphylos manzanita*), coast whitethorn (*Ceanothus incanus*) and coyote brush (*Baccharis pilularis*). Herbaceous plant species dominant in the meadow includes creeping bent grass (*Agrostis stolonifera*) and rattail sixweeks grass. Additional herbaceous plant species observed includes bull thistle (*Circium vulgare*), bristly ox-tongue (*Helminthotheca echioides*), French broom (*Genista monspessulana*), common plantain (*Plantago major*), sheep sorrel (*Rumex acetosella),* Western poison oak (*Toxicodendron diversilobum)* and Western vervain (*Verbena lasiostachys*). Throughout the grassland area pockets of spreading rush (*Juncus patens)* were observed; biologists determined these areas may be inundated with water for longer periods of time than other areas of the meadow.

Annual grassland habitat in the Project Area conforms to *Lolium perenne* Herbaceous Semi-Natural Alliance which is not ranked as a sensitive natural community by CDFW.

Wildlife observed in the annual grassland habitat within the Study Area included a variety of bird species such as spotted towhee (*Pipilo maculatus*), California scrub jay (*Aphelocoma californica*), western flycatcher (*Empidonax difficilis*), and chestnut chickadee (*Poecile rufescens*).

Douglas Fir

The lower overstory of Douglas fir (*Pseudotsuga menziesii* var. *menziesii*) habitat is typically made up of tanoak (*Notholithocarpus densiflorus* var. *densiflorus)* and Pacific madrone (*Arbutus menziesii*) with a higher overstory of Douglas fir. The understory composition is determined by humidity levels and elevation. In wetter climates, the shrub understory can be 100 percent cover in addition to a up to ten (10) percent herbaceous cover underneath. In drier climates, the shrub understory as well as the herbaceous understory are well developed. The herbaceous understory is dominant at higher elevations while the shrub understory tends to be dominant at lower elevations. Douglas fir habitat supports a wide variety of wildlife species. Bird species known to occur in Douglas fir habitat include spotted owl (*Strix occidentalis*), western flycatcher, chestnut-backed chickadee, golden-crowned kinglet (*Regulus satrapa*), Hutton's vireo (*Vireo huttoni*), solitary vireo (*Vireo solitarius*), hermit warbler (*Setophaga occidentalis*), and varied thrush (*Ixoreus naevius*). In addition, amphibians and reptiles know to occur in this habitat type include Northwestern salamander (*Ambystoma gracile*), Pacific giant salamander (*Dicamptodon tenebrosus*), Olympic salamander (*Rhyacotriton olympicus*), Del Norte salamander (*Plethodon elongatus*), black salamander (*Aneides flavipunctatus*), clouded salamander (*Aneides ferreus*), tailed frog (*Ascaphus truei*), and northwestern garter snake (*Thamnophis ordinoides*). Mammal species known to occur in Douglas fir habitat include fisher (*Pekania pennanti*), deer mouse (*Peromyscus maniculatus*), dusky-footed woodrat (*Neotoma fuscipes),* western red-backed vole (*Myodes californicus*), creeping vole (*Microtus oregoni*), Douglas' squirrel (*Tamiasciurus douglasii*), Trowbridge's shrew (*Sorex trowbridgii),* and shrew-mole (*Neurotrichus gibbsii*). The Douglas fir habitat in the Study Area conforms to the *Pseudotsuga menziesii - (Notholithocarpus densiflorus - Arbutus menziesii)* Forest & Woodland Alliance under the MCV system which has a California Rarity Rank of S4 and is not considered a sensitive natural community by CDFW.

Douglas-fir, tanoak and Pacific madrone were prevalent throughout the Study Area with portions of the Study Area dominated by Douglas-fir stands with a dense shrub understory of California huckleberry (*Vaccinium ovatum*). Some young coast redwoods (*Sequoia sempervirens*) were interspersed throughout the habitat. While CAL FIRE FRAP maps the majority of the Study Area as "montane-hardwood conifer," field observations indicate Douglas fir habitat more accurately describes the habitat type present. This habitat was also present along Vanauken Creek and the tributary to Vanauken Creek within the Study Area, with greater occurrences of California laurel (*Umbellularia californica*). Habitat in the Study Area often transitioned between Douglas fir and montane hardwood habitat (described below).

American black bear (*Ursus americanus*) scat was observed on numerous occasions throughout this habitat, often observed along the established dirt access roads. A variety of bird species were observed including California scrub-jay, Hermit thrush (*Catharus guttatus*), wrentit (*Chamaea fasciata*), Steller's jay (*Cyanocitta stelleri*), western flycatcher, spotted towhee *,* chestnut-backed chickadee, warbling vireo (*Vireo gilvus*), and Hutton's vireo. Dusky-footed woodrat nests were also observed.

Montane Hardwood

Tree composition of montane hardwood habitat is dependent on elevation levels in the Coast Ranges. Canyon live oak (*Quercus chrysolepis*) is typically found at low to mid-level elevations in pure stands on steep canyon slopes and rocky ridge tops. At higher elevations, canyon live oak is replaced by huckleberry oak (*Quercus vacciniifolia*). Lower elevations in the Coast Ranges tend to be dominated by knobcone pine (*Pinus attenuata*), foothill pine, Oregon white oak (*Quercus garryana*), and coast live oak (*Quercus agrifolia).* Mid-level elevations are dominated by Douglas-fir, tanoak, Pacific madrone, California laurel*,* California black oak (*Quercus kelloggii*) and bristlecone fir (*Abies bracteata).* Higher elevations are dominated by ponderosa pine (*Pinus ponderosa*), Coulter pine (*Pinus coulteri*), California white fir (*Abies concolor*), and Jeffrey pine (*Pinus jeffreyi*) (Jeffery pine occurring on serpentine and peridotite outcrops). The understory is typically made up of scattered woody shrubs such as manzanita (*Arctostaphylos* ssp.), mountain-mahogany (*Cercocarpus betuloides*), western poison oak and some forbs. Acorn disseminators including western scrub jay, Steller's jay, acorn woodpecker (*Melanerpes formicivorus*) and western gray squirrels (*Sciurus griseus*) as well as species who utilize accorns as a major food source such as wild turkey (*Meleagris gallopavo*), mountain quail (*Oreortyx pictus*), band-tailed pigeon (*Patagioenas fasciata*), California ground squirrel, dusky-footed woodrat, black bear, and mule deer (*Odocoileus hemionus*) are commonly found in montane hardwood habitats. A wide variety of amphibians and reptiles found in montane hardwood habitat include Mount Lyell salamander, ensatina, relictual slender salamander, western fence lizard, and sagebrush lizard, rubber boa, western rattlesnake, California mountain kingsnake, and sharp tailed snake. The montane hardwood habitat in the Study Area conforms to the *Notholithocarpus densiflorus* Forest Alliance under the MCV system which has a California Rarity Rank of S3 and is therefore considered a sensitive natural community by CDFW.

As with the Douglas-fir habitat described above, Douglas-fir, tanoak and Pacific madrone were dominant throughout the montane hardwood habitat within Study Area. However subdominant trees included canyon live oak, coast redwood and bigleaf maple (*Acer macrophyllum).* Howell's manzanita and California huckleberry dominated the shrub understory with western poison oak and wood rose (*Rosa gymnocarpa*) occurring as subdominant. Northern bracken fern (*Pteridium aquilinum var. pubescens)* dominated in the herbaceous understory.

Habitat in the Study Area often transitioned between Douglas fir (described above) and montane hardwood habitat and, as with Douglas fir habitat, wildlife observed and/or detected within the

Montane hardwood habitat included American black bear California scrub-jay, Hermit thrush, wrentit, Steller's jay, western flycatcher, spotted towhee, chestnut-backed chickadee, warbling vireo, Hutton's vireo, and dusky-footed woodrat.

Riparian forest

Riparian corridors along Vanauken Creek and tributaries of Vanauken were often a component of the Douglas-fir and montane hardwood habitats described above. Based on field observations and habitat mapping performed by Stillwater Sciences that overlaps a portion of the Study Area (Stillwater Sciences 2024) riparian habitat best conforms to *Alnus rubra* Forest Alliance and *Alnus rhombifolia* Forest and Woodland Alliance (Stillwater Sciences 2024); under the MCV system, these two alliances have a California Rarity Rank of S4 and are not considered sensitive natural communities by CDFW. Red alder (*Alnus rubra*), white alder (*Alnus rhombifolia*) and California laurel (*Umbellularia californica*) were prevalent in the upper canopy. The shrub and herbaceous understory were primarily composed of giant chain fern (*Woodwardia fimbriata*), elk clover (*Aralia californica*), western burning brush (*Euonymus occidentalis*), salal (Gaultheria shallon), western sword fern (*Polystichum munitum*), California blackberry (*Rubus ursinus*), coastal brook foam (*Boykinia occidentalis*) and coastal miterwort (*Pectiantia ovalis*).

4.3 Potential Jurisdictional Features

4.3.1 Wetlands and other Waters of the U.S./Waters of the State

Vanauken Creek and tributaries of Vanauken Creek and McKee Creek are expected to be subject to USACE jurisdiction as waters of the U.S. and RWQCB jurisdiction as a water of the state. No wetlands are present within the Study Area. Project activities are not anticipated to directly impact Vanauken Creek, tributaries of Vanauken Creek, or tributaries of McKee Creek.

4.3.2 Streams and Riparian Habitat Regulated under California Fish and Game Code

CDFW regulates activities that may: divert or obstruct the natural flow of any river, stream, or lake; change the bed, channel, or bank of any river, stream, or lake; use material from any river, stream, or lake; or deposit or dispose of material into any river, stream, or lake within streambanks and other waters of the state under California Fish and Game Code Section 1600. Additionally, CDFW regulates the removal of riparian habitat associated with such waters of the State. Project activities are not anticipated to directly impact the bed or banks of Vanauken Creek, tributaries of Vanauken Creek, or tributaries of McKee Creek. Pursuant to SPR BIO-4, ground disturbance within riparian habitats will be limited to the minimum necessary. Additionally, the Project proponent will notify CDFW pursuant to California Fish and Game Code Section 1602 prior to implementing any treatment activities in riparian habitats. The 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.

4.4 Special-Status Species

For the purpose of this report, special-status plant and wildlife species refer to those species that meet one or more of the following criteria:

- Species that are listed as threatened or endangered under the federal Endangered Species Act (ESA) (50 Code of Federal Regulations [CFR] Section 17.12 for listed plants, 50 CFR Section 17.11 for listed animals);
- Species that are candidates for possible future listing as threatened or endangered under ESA (76 Federal Register [FR] Section 66370);
- Species that are listed or candidates for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (14 California Code of Regulations [CCR] 670.5);
- Plants listed as rare under the California Native Plant Protection Act of 1977 (Fish and Game Code Section 1900 et seq.);
- California Rare Plant Rank (CRPR) List 1 and 2 species; and
- Animals fully protected in California (Fish and Game Code Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]) or designated as "Species of Special Concern" by CDFW.

Literature and database reviews (see Section 4.1.1) resulted in a list of fifteen (15) special-status plant species and sixteen (16) special status wildlife species known to occur in the general region of the Study Area. These species were assessed for potential to occur within the Study Area based on the following criteria:

None: the area contains a complete lack of suitable habitat, the local range for the species is restricted, and/or the species is extirpated in this region.

Not Expected: suitable habitat or key habitat elements might be present but might be of poor quality or isolated from the nearest extant occurrences, and/or the species is not known to occur in the area.

Possible: presence of suitable habitat or key habitat elements that potentially support the species, and/or species records indicate extant occurrences are known to occur in the area.

Present: the species was either observed directly or its presence was confirmed by field investigations or in previous studies in the area.

A full list of all special-status species reviewed along with habitat descriptions and an assessment of their potential to occur in the Study Area is included under **Appendix C.** Species assessed as present, possible, or not expected are discussed below.

4.4.1 Plants

Literature and database reviews resulted in a list of 15 special-status plant species known to occur in the region. Of these, eight were determined to have potential to occur in the Study Area. The remaining ten species were ruled out based on lack of suitable habitat, suitable substrates, and/or restricted ranges. A detailed description of the eight special-status plant species with potential to occur in the Study Area, along with their blooming periods, associated habitats, and evaluated level

of potential to occur is included below. A full list of special-status plants evaluated can be found in **Appendix C**.

No special-status plant species were detected during the reconnaissance-level survey in July 2025; however, the survey was conducted outside of the blooming periods for the species listed in **Appendix C** and therefore they may not have been detectable. A full list of plant species documented in the Study Area on July 15 and 16, 2025 is provided in **Appendix D**.

Special-status Plants with Potential to Occur in Study Area

Humboldt County milk-vetch

Humboldt County milk-vetch is listed as endangered under CESA. Suitable habitat in the Study Area for Humboldt County milk-vetch, a perennial herb, includes disturbed openings in partially timbered forest lands, along ridgelines and on south aspects in North Coast coniferous forest at 525 to 2198 feet elevation. Based on information from the Sanctuary Forest, the northern portion of the Study Area was previously logged (Stillwater Sciences 2021). In addition, disturbed openings are present along dirt access roads in the Study Area. Fuel break areas are located along ridgelines and portions of proposed treatment activities would be occurring on south-facing slopes based on the topographic data from the USGS. There are no recorded CNDDB occurrences of Humboldt County milk-vetch within five miles of the Study Area; however, there is one historic (1931) occurrence recorded in the online Jepson Herbaria (data provided by the Consortium of California Herbaria) mapped approximately five miles southwest of the Study Area. This species blooms from April to September.

North Coast semaphore grass

North Coast semaphore grass is listed as threatened under CESA. Marginal habitat in the Study Area for North Coast semaphore grass, a perennial rhizomatous herb, includes the meadow in the southern portion of the Study Area. This species is known to occur in meadow openings in wet grassy, shady areas in North Coast coniferous forest at 35 to 2,200 feet elevation. Generally, North Coast semaphore grass is found in meadows that are saturated during winter months. The meadow in the Study Area is predominantly exposed to full sun though the edges of the meadow may provide suitable shade to support this species. While this species is primarily known to occur in Marin, Sonoma and Mendocino Counties, there is one CNDDB record of North Coast semaphore grass in Humboldt County located over nine miles from the Study Area. This species blooms from April to June.

Howell's montia

Howell's montia is found in vernally wet sites often on compacted soil in meadows and seeps, north coast coniferous forest, and vernal pools at 33 to 3,297 feet elevation. One CNDDB occurrence for Howell's montia from 1923 is mapped approximately 0.75 mile south of the Study Area; the record indicates Howell's montia was observed on wet ground along an undisclosed creek. Suitable habitat for Howell's montia may be present along Vanauken Creek and associated tributaries. A standard minimum 50-foot buffer would be maintained along riparian habitat for all treatment activities except manual riparian thinning. Manual riparian thinning would include the use of hand tools and hand-operated power tools to cut, clear and/or prune trees, herbaceous vegetation and woody shrubs.

Giant fawn lily

Giant fawn lily is a perennial herb found in openings in woodland, sometimes on serpentine and rocky sites, in cismontane woodland and meadows and seeps at 984 to 4,708 feet elevation. It blooms March to June. There are no CNDDB occurrence within five miles of the Study Area for giant fawn lily, however, roadcuts and openings in forest habitat, though limited, may provide suitable habitat for giant fawn lily throughout the Study Area. The meadow in the southern portion of the Study Area may also provide suitable habitat for this species.

Coast fawn lily

Coast fawn lily is a perennial bulbiferous herb are known to occur in mesic sites and stream banks in North Coast coniferous forest, bogs and fens and broadleafed upland forest from 197 to 4,610 feet elevation. It blooms from March to July. While there are no known CNDDB occurrences of coast fawn lily within five miles of the Study Area, suitable habitat for coast fawn lily may be present along Vanauken Creek and associated tributaries. A standard minimum 50-foot buffer would be maintained along riparian habitat for all treatment activities except manual riparian thinning. Manual riparian thinning would include the use of hand tools and hand-operated power tools to cut, clear and/or prune trees, herbaceous vegetation and woody shrubs.

Small groundcone

Small groundcone is a perennial rhizomatous herb (parasitic) found in North Coast coniferous forest in open woods, shrubby places. This species is parasitic and often found on *Gaultheria shallon*, occasionally on *Arbutus menziesii* and *Arctostaphylos uva-ursi* at 394 to 4,708 feet elevation. It blooms from April to August. There are no known occurrences within five miles of the Study Area. However, suitable coniferous forest habitat is present. *Gaultheria shallon* is a common in coniferous forest understory and is known to occur in coastal areas (California Native Plant Society 2025a). *Gaultheria shallon* and *Arbutus menziesii* were observed throughout the Study Area during the biological reconnaissance survey. Roadcuts and openings in forest habitat, though limited, in North Coast coniferous forest, may provide suitable habitat for small groundcone throughout the Study Area.

White-flowered rein orchid

White-flowered rein orchid is a perennial herb found in forest duff, mossy banks, rock outcrops and muskeg, occasionally on serpentine, in north coast coniferous forest, lower montane coniferous forest and broadleafed upland forest at 148 to 5,299 feet elevation. It blooms May to September. There are thirteen CNDDB occurrences from 2012 and 2019 mapped with five miles of the Study Area. There are two occurrences (2019) mapped within 1.5 miles east and southeast of the Study Area. A thick detritus layer was observed on the forest floor during the field survey which provides suitable habitat for white-flowered rein orchid throughout the Study Area.

Siskiyou checkerbloom

Siskiyou checkerbloom is a perennial rhizomatous herb found in open coastal forest, bluffs and roadcuts in coastal bluff scrub, coastal prairie and north coast coniferous forest at 16 to 4,117 feet elevation. It blooms May to August. Suitable open coastal forest habitat is limited in the Study Area but may be present among openings of grassland habitat in the southern portion of the Study Area. There are no CNDDB occurrences within five miles of the Study Area. The nearest CNDDB occurrences are mapped approximately nine miles east of the Study Area; and indicate the species was found along meadow edges, weedy pasture fence lines, and with poison oak and other brush on the edge of a sloping wet meadow.

4.4.2 Wildlife

Literature and database reviews resulted in a list of 17 special-status wildlife species known to occur in the region. Of these, ten were determined to have potential to occur in the Study Area. The eleven (11) special-status wildlife species with potential to occur in the Study Area, along with their associated habitats, and evaluated level of potential to occur, are described in detail below. A full list of special-status wildlife species evaluated can be found in **Appendix C**.

No special-status wildlife species were observed during the reconnaissance-level survey of the Study Area in July 2025; however, suitable habitat for each of the special-status species listed below is present and the animals may occur in the Study Area either year-round, seasonally, or as transients. Additionally, nesting birds protected under the Migratory Bird Treaty Act and Fish and Game Code are likely to be present in the Study Area during the avian nesting season (typically February 15 – August 31). Birds may nest in trees, shrubs, structures, and on the ground in all habitats, including developed areas.

As described in Section 4.2.2, wildlife species detected during the July 2025 survey included California scrub-jay, hermit thrush, wrentit, Steller's jay, western flycatcher, spotted towhee, chestnut-backed chickadee, warbling vireo, Hutton's vireo, American black bear (scat), and dusky-footed woodrat (*Neotoma fuscipes*) nests. Additionally, coastal giant salamander (*Dicamptodon tenebrosus*) larvae and what appeared to be yearling trout species were observed in Vanauken Creek within 500 feet of the Study Area. Sections of Vanauken Creek within the Study Area were difficult to access due to steep slopes.

Special-status Wildlife with Potential to Occur in Study Area

Monarch Butterfly

Possible breeding and migrating habitat are present in the Study Area for monarch butterfly; however, overwintering habitat is not present. Winter roosts sites for the Western population of monarch butterfly extend along the coast from northern Mendocino County, California to Baja California, Mexico. Roosts are located in wind-protected tree groves of eucalyptus, Monterey pine, or cypress. Monarch butterflies have potential to migrate through the Project area, and adults may feed on nectar sources and mate while in the Project area. If milkweed (*Asclepias* spp.) plants are present in the Project area, adults may lay eggs on the plants, with any emerging larvae feeding on the plants before undergoing metamorphosis to become an adult. Monarch butterflies are dependent on their host plants, milkweed, to breed; monarch butterflies lay their eggs on the milkweed plant which then becomes the food source for caterpillars once the eggs hatch. Narrow-leaf milkweed (*Asclepias fascicularis*) is native to the Humboldt area though additional milkweed species such as showy milkweed (*Asclepias speciosa*) which is native to California may occur in the Study Area. No milkweed species were observed during field observations; however, topography and dense vegetation restricted the crew from surveying the entire treatment area. Narrow-leaf milkweed is known to occur on dry ground in valley and foothill grassland; the meadow in the southern portion of the Study Area may provide suitable habitat. Showy milkweed (Asclepias speciosa) is known to occur in a wide variety of habitats including fields, roadsides and riparian corridors though this species is generally found in depressions where water accumulates if annual precipitation is less than 9 inches (Stevens 2000). Suitable habitat for showy milkweed includes riparian corridors along Vanauken Creek and its tributaries, the meadow and along existing dirt access roads throughout the Study Area. The Project area does not provide suitable overwintering habitat (i.e., wind-protected groves of eucalyptus, Monterey pine, or cypress) and the nearest known overwintering site is over 15 miles south, on the Mendocino County coast.

Amphibians

Foothill yellow-legged frog – north coast DPS

Foothill yellow-legged frog – north coast DPS is a California species of special concern known to be present in Vanauken Creek. A 2018 CNDDB occurrence mapped to Vanauken Creek intersects the Study Area; the record indicates one adult was photographed, but a 1200-meter survey reach along Vanauken Creek recorded numerous foothill yellow-legged frogs. Suitable dispersal and overwintering habitat is present in Vanauken Creek and associated tributaries of Vanauken and McKee Creeks. Due to dense tree canopy and lack of sun exposure, breeding habitat is not present in the Study Area. However, it is possible juvenile frogs may be present in the Study Area year-round.

Red-bellied Newt

Suitable breeding and upland habitat is present in Vanauken Creek and its tributaries, and adjacent forest habitat for red-bellied newt. The nearest CNDDB occurrence from 1974 is mapped approximately 0.5 mile west of the Study Ara to the intersection of Shelter Cove Road and Mattole River. Treatment activities are not proposed to take place in state and federally protected wetlands, or other aquatic habitats including streams; therefore, impacts to breeding habitat are not expected. This species is known to travel one mile or more from breeding habitat. During aestivation, which typically takes place during summer months, red-bellied newt is found underground within root channels. Rain events typically trigger migration to breeding habitats. (Thomas et al. 2016).

Southern torrent salamander

Southern torrent salamander is not expected to occur in the Study Area. This species is more commonly known to occur in high-gradient streams which are not present in the Study Area. Vanauken Creek and associated tributaries may provide marginal habitat for this species. Southern torrent salamander typically remain in close proximity to aquatic habitat because they are very sensitive to desiccation. Riparian corridors are important foraging habitat for this species. (USFWS 2000). Treatment activities are not proposed to take place in state and federally protected wetlands, or other aquatic habitats including streams; however, manual riparian trimming may occur within 50 feet of waterways.

Northwestern Pond Turtle

This species is known to occur in the Mattole River, located approximately 0.3 kilometer west of the Study Area. The nearest CNDDB occurrence from 2006 is mapped approximately 4.75 mile north of the Study Area to the Mattole River. While waterways within the Study Area are tributaries of Mattole River, field observations and aerial imagery determined suitable aquatic habitat is not present for this species due to dense tree canopy limiting suitable basking sites. However, the grassy meadow in the southern portion of the Study Area and adjacent forest habitat may provide suitable upland habitat for this species. Northwestern pond turtles are more commonly known to nest within 100 meters of suitable aquatic habitat, though they have been recorded traveling up to 400 meters from aquatic habitat to nest (USFWS 2023). This species is known to nest in open, sunny habitats such as annual grassland. In addition, this species is known to travel up to 500 meters to overwinter in shrubby/forested areas where a deep layer of duff or leaf litter is present (Western Pond Turtle Range-wide Conservation Coalition 2020).

Fish

Coho salmon – southern Oregon/northern California Evolutionary Significant Unit (ESU), steelhead – northern California DPS summer-run, and steelhead – northern California DPS winter-run

Coho salmon – southern Oregon/northern California Evolutionary Significant Unit (ESU), steelhead – northern California DPS summer-run, and steelhead – northern California DPS winter-run are known to occur in Vanauken Creek (CDFW 1994; Stillwater Sciences 2024). Vanauken Creek is designated critical habitat for Steelhead (Northern California Distinct Population Segment [DPS]) and Essential Fish Habitat for Chinook and Coho salmon. Coho salmon require beds of loose, silt-free, coarse gravel for spawning as well as cover, cool water, and sufficient dissolved oxygen. Coho salmon is known to spawn and rear in the Mattole River and its tributaries including Vanauken Creek (Stillwater Sciences 2024). The nearest CNDDB occurrences (1994) of coho salmon are recorded approximately 2.5 miles northwest of the Study Area; the record indicates the occurrences are mapped to Eubanks Creek and Big Finley Creek above the confluence with the Mattole River. Summer-run steelhead are known to migrate further inland than winter-run steelhead. Summer-run steelhead seek refuge in deep pools preferably with large boulders or woody debris for shelter from predators. Winter-run steelhead are known to entire freshwater environments sexually mature and factors such as water flow and temperature do not significantly impact migration for winter-run steelhead. The Stream Inventory Report for Vanauken Creek (CDFW 1994) indicates steelhead fry were found in the summer of 1996.

Chinook Salmon – California Coastal ESU

Essential Fish Habitat is mapped to the Study Area for chinook salmon – California coastal ESU. This species is not expected to occur due to a lack of suitable spawning and rearing habitat. Vanauken Creek is considered poor spawning habitat based on chinook salmon California coastal distribution 2005 NOAA data (NOAA 2005). While the Mattole River, located outside of the Study Area, is mapped as designated critical habitat for chinook salmon, Vanauken Creek is not. However, it is possible this species may occur near the confluence of the Mattole River and Vanauken Creek, especially during the winter when water flows are likely higher. The Study Area intersects Vanauken Creek approximately 0.2 mile west from the confluence of Mattole River and Vanauken Creek.

Northern Spotted Owl

This species is known to be present in the Study Area. There are two known nest locations, three activity centers and three positive occurrences mapped by CDFW Spotted Owl Observations Database within or in the immediate vicinity of the Study Area. While this species is generally associated with old-growth conifer forest habitat which was determined to not be present in the Study Area based on field observations, the nest occurrences record northern spotted owl nests found in Douglas fir and Pacific madrone trees. Mature Douglas fir, tanoak and Pacific madrone trees observed in the Study Area during the biological reconnaissance survey provide suitable nesting habitat for this species. In addition to breeding habitat, suitable roosting and foraging habitat is present throughout the Study Area. A few of the occurrences are mapped along ridges within the fuel break areas.

Sonoma Tree Vole

Suitable Douglas-fir habitat is present in the Study Area for Sonoma tree vole. Sonoma tree vole spends the entirety of their lifecycle in the tree canopy. Sonoma tree vole feed almost exclusively on

Douglas-fir needles, using the discarded resin ducts from the needles to then create their nests. Douglas fir trees were observed throughout the Study Area during the biological reconnaissance survey.

4.5 Critical Habitat and Essential Fish Habitat

Vanauken Creek is designated critical habitat for Steelhead (Northern California DPS) and Essential Fish Habitat for Chinook and Coho salmon. Mapped critical habitat in the Study Area is shown in **Figure 6**.

4.6 Wildlife Corridors

Wildlife corridors, also referred to as wildlife movement corridors, dispersal corridors, landscape linkages or ecological corridors, provide connectivity between natural habitats for plants and animals in an environment that is increasingly fragmented due to anthropogenic influences. Wildlife corridors are essential for many plants and animals to complete their life cycle. (Travers et al. 2021; USFWS 2025d). Land ownership of the Study Area is comprised of two conservation easements; the Sanctuary Forest and the Northcoast Regional Land Trust. Conservation easements are often used as a tool for land conservation including conserving wildlife corridors. The Study Area provides connectivity between the King Range National Conservation Area (Bureau of Land Management) and surrounding forest habitat; based on aerial imagery, there is approximately fifteen (15) miles of relatively continuous forest habitat from the Pacific Ocean and eastward. Riparian corridors along Vanauken Creek and McKee Creek and associated tributaries provide connectivity between the Study Area and the adjacent Mattole River.

5 Summary and Recommendations

The Vanauken Creek Fuel Break Project seeks to safeguard the rural community of Whitethorn from wind-driven wildfires by establishing three shaded fuel breaks equaling approximately 171-acres that would reduce the amount and continuity of hazardous fuels, and up to an additional 426 acres that would be subject to burn preparation/fire hazard reduction, prescribed burn, and reentry. Project activities include manual treatment (including riparian thinning), mechanical treatment, and prescribed burning (broadcast and pile). While not currently planned, herbicide (spot treatment) is included as an optional treatment. These treatment activities may impact protected biological resources including sensitive natural communities, special status plants and wildlife, nesting birds, and riparian habitat.

Five special-status plant species have potential to occur in the Study Area, particularly in the Douglas-fir and montane hardwood forest habitats. Two of the eight special-status plant species is listed under the CESA as endangered or threatened (Humboldt County milk-vetch and North Coast semaphore grass). The remaining six species are not listed, proposed, or candidate species under the FESA or CESA, but all have CRPRs of 1B or 2B (giant fawn lily, coast fawn lily, small groundcone, Howell's montia, white-flowered rein orchid and Siskiyou checkerbloom). Protocol-level surveys for special-status plant species were not conducted as part of the reconnaissance-level review of the Study Area; therefore, although no special-status plants were documented they may nonetheless be present. If present, manual and mechanical treatments (including herbicide treatment if employed) may adversely impact special-status plants.

Eleven (11) special-status wildlife species have potential to occur in the Study Area. This includes five species listed as threatened or endangered under FESA and/or CESA (chinook salmon – California coastal ESU, coho salmon – southern Oregon/northern California ESU, steelhead - northern California DPS summer-run, steelhead - northern California DPS winter-run and northern spotted owl), and two species proposed for listing as threatened under FESA (monarch butterfly and northwestern pond turtle). Five additional special-status species with potential to occur are designated as Species of Special Concern (foothill yellow-legged frog – north coast DPS, southern torrent salamander, red-bellied newt and Sonoma tree vole) by CFDW.

Five of the 11 special-status wildlife species are known to be present in the Study Area including foothill yellow-legged frog, coho salmon – southern Oregon/northern California ESU, steelhead - northern California DPS summer-run, steelhead - northern California DPS winter-run and northern spotted owl. Nesting birds, most of which are protected under the MBTA and F&G Code, are also likely to be present during the avian nesting season. If present, mechanical treatments and prescribed burning may adversely impact special-status wildlife and nesting birds.

Vanauken Creek and its associated tributaries and an unnamed tributary of McKee Creek are likely both federal and state-jurisdictional waterways. No direct impacts to waterways are anticipated, however impacts to riparian habitat would occur. Impacts to riparian habitat would be subject to CDFW review under the agency's Lake and Streambed Alteration Program.

Treatment activities may impact montane hardwood habitat, which is considered a sensitive natural community. The montane hardwood habitat in the Study Area conforms to the *Notholithocarpus densiflorus* Forest & Woodland Alliance under the MCV system which has a California Rarity Rank of S3.

The potential for adverse effects to biological resources is within the scope of the activities and impacts addressed in the PEIR because the activities and level of disturbance as a result of

implementing treatment activities are consistent with those analyzed in the PEIR (CalVTP Final PEIR Volume II Section 3.6.3). Based on the evaluation of known or potential sensitive biological resources present in the proposed Project treatment area, the following SPRs and MMs are applicable to the Vanauken Creek Fuel Break Project.

5.1.1 Standard Project Requirements

- **SPR AD-1 Project Proponent Coordination:** For treatments coordinated with CAL FIRE, CAL FIRE will meet with the project proponent to discuss all natural and environmental resources that must be protected using SPRs and any applicable mitigation measures; identify any sensitive resources onsite; and discuss resource protection measures. For any prescribed burn treatments, CAL FIRE will also discuss the details of the burn plan in the incident action plan (IAP)-. This SPR applies to all treatment activities and treatment types, including treatment maintenance.
- **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.
- **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.
- **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.
- **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.
- **SPR AQ-4 Minimize Dust**: To minimize dust during treatment activities, the project proponent will implement the following measures:

- Limit the speed of vehicles and equipment traveling on unpaved areas to 15 miles per hour to reduce fugitive dust emissions, in accordance with the California Air Resources Board (CARB) Fugitive Dust protocol.
- If road use creates excessive dust, the project proponent will wet appurtenant, unpaved, dirt roads using water trucks or treat roads with a non-toxic chemical dust suppressant (e.g., emulsion polymers, organic material) during dry, dusty conditions. Any dust suppressant product used will be environmentally benign (i.e., non-toxic to plants and will not negatively impact water quality) and its use will not be prohibited by ARB, EPA, or the State Water Resources Control Board (SWRCB). The project proponent will not over-water exposed areas such that the water results in runoff. The type of dust suppression method will be selected by the project proponent based on soil, traffic, site-specific conditions, and air quality regulations.
- Remove visible dust, silt, or mud tracked-out on to public paved roadways where sufficient water supplies and access to water is available. The project proponent will remove dust, silt, and mud from vehicles at the conclusion of each workday, or at a minimum of every 24 hours for continuous treatment activities, in accordance with Vehicle Code Section 23113.
- Suspend ground-disturbing treatment activities, including land clearing and bulldozer lines, when there is visible dust transport (particulate pollution) outside the treatment boundary, if the particulate emissions may "cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property," per Health and Safety Code Section 41700.

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

- **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:

1. **Suitable Habitat Is Present but Adverse Effects Can Be Clearly Avoided**. If, based on the data review and reconnaissance-level survey, the qualified RPF or biologist determines that suitable habitat for sensitive biological resources is present but adverse effects on the suitable habitat can clearly be avoided through one of the following methods, the avoidance mechanism will be implemented prior to initiating treatment and will remain in effect throughout the treatment:
    a. by physically avoiding the suitable habitat, or
    b. by conducting treatment outside of the season when a sensitive resource could be present within the suitable habitat or outside the season of sensitivity (e.g., outside of special-status bird nesting season, during dormant season of sensitive annual or geophytic plant species, or outside of maternity and rearing season at wildlife nursery sites).

    Physical avoidance will include flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway) to delineate the boundary of the avoidance area around the suitable habitat. For physical avoidance, a buffer may be implemented as determined necessary by the qualified RPF or biologist.
2. **Suitable Habitat is Present and Adverse Effects Cannot Be Clearly Avoided**. Further review and surveys will be conducted to determine presence/absence of sensitive biological resources that may be affected, as described in the SPRs below. Further review may include contacting USFWS, NOAA Fisheries, CDFW, CNPS, or local resource agencies as necessary to determine the potential for special-status species or other sensitive biological 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.

- **SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats**. If SPR BIO-1 determines that sensitive natural communities or sensitive habitats may be present and adverse effects cannot be avoided, the project proponent will:
  - Require a qualified RPF or biologist to perform a protocol-level survey following the CDFW "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" (current version dated March 20, 2018) of the treatment area prior to the start of treatment activities for sensitive natural communities and sensitive habitats. Sensitive natural communities will be identified using the best means possible, including keying them out using the most current edition of *A Manual of California Vegetation* (including updated natural communities data at http://vegetation.cnps.org/), or referring to relevant reports (e.g., reports found on the VegCAMP website).
  - Map and digitally record, using a Global Positioning System (GPS), the limits of any potential sensitive habitat and sensitive natural community identified in the treatment area.

  This SPR applies to all treatment activities and treatment types, including treatment maintenance.
- **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 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 pursuant to 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 objectives and would result in effects to the Beneficial Functions of Riparian Zones equal or more favorable than those expected to result from application of the above measures. Deviation from the above design specifications, different protection measures and design standards will only be approved when the treatment plan incorporates an evaluation of beneficial functions of the riparian habitat and with written concurrence from CDFW.

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

- **SPR BIO-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;
- 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 *Phytopthoras* in Native Habitats 2016).

This SPR applies to all treatment activities and treatment types, including treatment maintenance.

- **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.

- **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, ~~and~~ noxious weeds, or invasive wildlife;
  - for all heavy equipment and vehicles traveling off road, pressure wash, if feasible, or otherwise appropriately decontaminate equipment at a designated weed-cleaning station prior to entering the treatment area from an area with infestations of invasive plants, noxious weeds, or invasive wildlife. Anti-fungal wash agents will be specified if the equipment has been exposed to any pathogen that could affect native species;
  - inspect all heavy equipment, vehicles, tools, or other treatment-related materials for sand, mud, or other signs that weed seeds or propagules could be present prior to use in the treatment area. If the equipment is not clean, the qualified RPF or biological technician will deny entry to the work areas;
  - stage equipment in areas free of invasive plant infestations unless there are no uninfested areas present within a reasonable proximity to the treatment area;
  - identify significant infestations of invasive plant species (i.e., those rated as invasive by Cal-IPC or designated as noxious weeds by California Department of Food and Agriculture) during reconnaissance-level surveys and target them for removal during treatment activities. Treatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles;
  - 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.

- **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.

- **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).

  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 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.

- **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.
- **SPR GEO-3 Stabilize Disturbed Soil Areas:** The project proponent will stabilize soil disturbed during mechanical ~~and~~ 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, ~~or~~ prescribed herbivory, or prescribed burn treatment activities could result in substantial sediment discharge from soil disturbed by machinery ~~or~~ 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, ~~and~~ prescribed herbivory, and prescribed burns that result in exposure of bare soil over 50 percent of the project area treatment activities and all treatment types, including treatment maintenance.
- **SPR GEO-4 Erosion Monitoring:** The project proponent will inspect treatment areas for the proper implementation of erosion control SPRs and mitigations prior to the rainy season. If erosion control measures are not properly implemented, they will be remediated prior to the first rainfall event per SPR GEO-3 and GEO-8. Additionally, the project proponent will inspect for evidence of erosion after the first large storm or rainfall event (i.e., ≥ 1.5 inches in 24 hours) as soon as is feasible after the event. Any area of erosion that will result in substantial sediment discharge will be remediated within 48 hours per the methods stated in SPRs GEO-3 and GEO-8. This SPR applies only to mechanical, prescribed herbivory, and prescribed burning treatment activities and all treatment types, including treatment maintenance.
- **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. ~~comply with 14 CCR 914 [934, 954].~~ This SPR applies only to mechanical, manual, and prescribed burn treatment activities and all treatment types, including treatment maintenance.
- **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.

- **SPR HAZ-5 Spill Prevention and Response Plan:** The project proponent or licensed Pest Control Advisor (PCA) will prepare a Spill Prevention and Response Plan (SPRP) prior to beginning any herbicide treatment activities to provide protection to onsite workers, the public, and the environment from accidental leaks or spills of herbicides, adjuvants, or other potential contaminants. The SPRP will include (but not be limited to):
  - a map that delineates staging areas, and storage, loading, and mixing areas for herbicides;
  - a list of items required in an onsite spill kit that will be maintained throughout the life of the activity;
  - procedures for the proper storage, use, and disposal of any herbicides, adjuvants, or other chemicals used in vegetation treatment.

  This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.
- **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.

- **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, ~~G~~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.
- **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

Water Class	Class I	Class II	Class III	Class IV
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.	1) Fish always or seasonally present offsite within 1000 feet downstream and/or 2) Aquatic habitat for nonfish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.	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.	Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.
WLPZ Width (ft) – Distance from top of bank to the edge of the protection zone				
< 30 % Slope	75	50	Sufficient to prevent the degradation of downstream beneficial uses of water. Determined on a site-specific basis.	
30-50 % Slope	100	75		
>50 % Slope	150	100		

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

The following WLPZ protections will be applied for all treatments:

- Treatment activities with WLPZs will meet the overstory and understory vegetation retention guidelines and ground disturbance limitations described in 14 CCR Section 916.4 [936.4, 956.4] Subsection (b) and Section 916.5, including retention of at least 75 percent surface cover and undisturbed area. retain at least 75 percent surface cover and undisturbed area to act as a filter strip for raindrop energy dissipation and for wildlife habitat. If this percentage is reduced, a qualified RPF will provide the project proponent with a site- and/or treatment activity-specific explanation for the percent surface cover reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced percent as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). This requirement is based on 14 CCR Section 916.4 [936.4, 956.4] Subsection (b)(6) (February 2019 version) and 14 CCR Section 916.5 (February 2019 version).
- Equipment, including tractors and vehicles, must not be driven in wet areas or WLPZs, except over existing roads or watercourse crossings where vehicle tires or tracks remain dry.
- Equipment used in vegetation removal operations will not be serviced in WLPZs, within wet meadows or other wet areas, or in locations that would allow grease, oil, or fuel to pass into lakes, watercourses, or wet areas.
- WLPZs will be kept free of slash, debris, and other material that harm the beneficial uses of water. Accidental deposits will be removed immediately.
- Burn piles will be located outside of WLPZs.
- No fire ignition (nor use of associated accelerants) will occur within WLPZs however low intensity backing fires may be allowed to enter or spread into WLPZs.
- Large areas of bare soil within WLPZs that are exposed by treatment activities will be stabilized with mulching, rip-rap, grass seeding, or soil stabilizers prior to the beginning of the rainy season, as described in 14 CCR 916.7. Within Class I and Class II WLPZs, locations where project operations expose a continuous area of mineral soil 800 square feet or larger shall be treated for reduction of soil loss. Treatment shall occur prior to October 15th and disturbances that are created after October 15th shall be treated within 10 days. Stabilization measures shall be selected that will prevent significant movement of soil into water bodies and may include but are not limited to mulching, rip-rap, grass seeding, or chemical soil stabilizers.

Where mineral soil has been exposed by project operations on approaches to watercourse crossings of Class I, II, or III within a WLPZ, the disturbed area shall be stabilized to the extent necessary to prevent the discharge of soil into watercourses or lakes in amounts that would adversely affect the quality and beneficial uses of the watercourse.

Where necessary to protect beneficial uses of water from project operations, protection measures such as seeding, mulching, or replanting shall be used to retain and improve the natural ability of the ground cover within the WLPZ to filter sediment, minimize soil erosion, and stabilize banks of watercourses and lakes.

- Equipment limitation zones (ELZs) will be designated adjacent to Class III and Class IV watercourses with minimum widths of 25 feet where side-slope is less than 30 percent and 50 feet where side-slope is 30 percent or greater. An RPF will describe the

limitations of heavy equipment within the ELZ and, where appropriate, will include additional measures to protect the beneficial uses of water.

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.

5.1.2 Mitigation Measures

Mitigation Measure BIO-1a: Avoid Loss of Special-Status Plants Listed under ESA or CESA
If listed plants are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will avoid and protect these species by establishing a no-disturbance buffer around the area occupied by listed plants and marking the buffer boundary with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway), exceptions to this requirement are listed later in this measure. The no-disturbance buffers will generally be a minimum of 50 feet from listed plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid killing or damaging listed plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity.

The appropriate buffer size will be determined based on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species' vulnerability to the treatment method being used, and environmental conditions and terrain. For example, paint-on or wicking application of herbicides to invasive plants may be implemented within 50 feet of listed plant species without posing a risk, especially if the listed plants are dormant at the time of application. Consideration of factors such as site hydrology, changes in light, edge effects, and potential introduction of invasive plants and noxious weeds may inform the determination of buffer width. If a no-disturbance buffer is reduced below 50 feet from a listed plant, a qualified RPF or botanist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report) with a science-based justification for the deviation. No fire ignition (and associated use of accelerants) will occur within 50 feet of listed plants.

For species listed under ESA or CESA, if the project proponent cannot avoid loss by implementing no-disturbance buffers, the project proponent will implement Mitigation Measure BIO-1c.

The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist, in consultation with CDFW and USFWS, as appropriate depending on species status and location, that the listed plants would benefit from treatment in the occupied habitat area even though some of the listed plants may be lost during treatment activities. For a treatment to be considered beneficial to listed special-status plants, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to listed plants, no compensatory mitigation for loss of individuals will be required.

Mitigation Measure BIO-1b: Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA
If non-listed special-status plant species (i.e., species not listed under ESA or CESA, but meeting the definition of special-status as stated in Section 3.6.1 of the 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 (and associated use of accelerants) will occur within the special-status plant buffer.

A qualified RPF or botanist with knowledge of the special-status plant species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment would not maintain habitat function of the special-status plant habitat (i.e., the habitat would be rendered unsuitable) or because the loss of special-status plants would substantially reduce the number or restrict the range of a special-status plant species. If the project proponent determines the impact on special-status plants would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status plants or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-1c will be implemented.

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

Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants

If significant impacts on listed or non-listed special-status plants cannot feasibly be avoided as specified under the circumstances described under Mitigation Measures BIO-1a and 1b, the project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant impacts that require compensatory mitigation and describes the compensatory mitigation strategy being implemented and how unavoidable losses of special-status plants will be compensated. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. If the special-status plant taxa are listed under ESA or CESA, the plan will be submitted to CDFW and/or USFWS (as appropriate) for review and comment.

The first priority for compensatory mitigation will be preserving and enhancing existing populations outside of the treatment area in perpetuity, or if that is not an option because existing populations

that can be preserved in perpetuity are not available, one of the following mitigation options will be implemented by the project proponent instead:

- creating populations on mitigation sites outside of the treatment area through seed collection and dispersal (annual species) or transplantation (perennial species);
- purchasing mitigation credits from a CDFW- or USFWS-approved conservation or mitigation bank in sufficient quantities to offset the loss of occupied habitat; and
- if the affected special-status plants are not listed under ESA or CESA, compensatory mitigation may include restoring or enhancing degraded habitats so that they are made suitable to support special-status plant species in the future.

If relocation efforts are part of the Compensatory Mitigation Plan, the plan will include details on the methods to be used, including collection, storage, propagation, receptor site preparation, installation, long-term protection and management, monitoring and reporting requirements, success criteria, and remedial action responsibilities should the initial effort fail to meet long-term monitoring requirements. The following performance standards will be applied for relocation:

- the extent of occupied area will be substantially similar to the affected occupied habitat and will be suitable for self-producing populations. Re-located/re-established populations will be considered suitable for self-producing when:
- habitat conditions allow for plants to reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding; and
- reestablished habitats contain an occupied area comparable to existing occupied habitat areas in similar habitat types in the region.

If preservation of existing populations or creation of new populations is part of the mitigation plan, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands and actions (e.g., the number and type of credits, location of mitigation bank or easement, restoration or enhancement actions), parties responsible for the long-term management of the land, and the legal and funding mechanisms (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory plant populations will be preserved in perpetuity.

If mitigation includes dedication of conservation easements, purchase of mitigation credits, or other offsite conservation measures, the details of these measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, funding assurances, and success criteria such as those listed above and other details, as appropriate to target the preservation of long term viable populations.

If mitigation includes restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat.

If the loss of occupied habitat cannot be offset (e.g., if preservation of existing populations or creation of new populations through relocation efforts are not available for a certain species), and as a result treatment activities would substantially reduce the number or restrict the range of listed plant species, then the treatment will not qualify as within the scope of 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 Measure BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species (All Treatment Activities)

If California Fully Protected Species or species listed under ESA or CESA are observed during reconnaissance surveys (conducted pursuant to SPR BIO-1) or focused or protocol-level surveys (conducted pursuant to SPR BIO-10), the project proponent will avoid adverse effects to the species by implementing the following.

Avoid Mortality, Injury, or Disturbance of Individuals

The project proponent will implement one of the following 2 measures to avoid mortality, injury, or disturbance of individuals:

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

- For species listed under ESA or CESA, if the project proponent cannot avoid mortality, injury or disturbance by implementing one of the two options listed above, the project proponent will implement Mitigation Measure BIO-2c.
- Injury or mortality of California Fully Protected Species is prohibited pursuant to Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code and will be avoided.

Maintain Habitat Function

The project proponent will design treatment activities to maintain the habitat function, by implementing the following:

- While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; dens; tree snags; large raptor nests [including inactive nests]; downed woody debris; food sources). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science.
- If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that listed or fully protected wildlife with specific requirements for high canopy cover (e.g., Humboldt marten,

fisher, spotted owl, coastal California gnatcatcher, riparian woodrat) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted [e.g., 50 percent for coastal California gnatcatcher]) such that habitat function is maintained.

- A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.

Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)

If other special-status wildlife species (i.e., species not listed under CESA or ESA or California Fully Protected, but meeting the definition of special status as stated in Section 3.6.1 of the 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).
- 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 ~~may~~ will be required to monitor the effectiveness of the no-disturbance buffer around the nest, den, burrow, or other occurrence during treatment. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in mortality, injury or disturbance to special-status species.

- For prescribed burning, the project proponent will implement the treatment outside the sensitive period of the species' life history (e.g., outside the breeding or nesting season) during which the species may be more susceptible to disturbance, or disturbance could result in loss of eggs or young. For species present year-round, the qualified RPF or biologist will determine the period of time within which prescribed burning could occur that will avoid or minimize mortality, injury, or disturbance of the species. The project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate limited operating periods.

Maintain Habitat Function

For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following:

- While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science.
- If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that special-status wildlife with specific requirements for high canopy cover (e.g., northern goshawk, Sierra Nevada snowshoe hare) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted) such that the habitat function is maintained.
- A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. The qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding habitat function.
- A qualified RPF or biologist with knowledge of the special-status wildlife species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status wildlife species' habitat or because the loss of special-status wildlife would substantially reduce the number or restrict the range of a special-status wildlife species. If the project proponent determines the impact on

special-status wildlife would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status wildlife or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented.

The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the non-listed special-status wildlife would benefit from treatment in the occupied habitat area even though some of the non-listed special-status wildlife may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to non-listed special-status wildlife, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), 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
2. Restoring or enhancing existing habitat within the treatment area or outside of the treatment area (including decommissioning roads, adding perching structures, removing existing perching structures, or removing existing movement barriers or other existing features that are adversely affecting the species).

The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and:

1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanisms for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity.

2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat.

Review requirements are as follows:

- The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in order to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan.
- For species listed under ESA or CESA or a California Fully Protected Species, the project proponent will submit the mitigation plan to CDFW and/or USFWS/NOAA Fisheries for review and comment.
- For other special-status wildlife species the project proponent may consult with CDFW and/or USFWS regarding the availability and applicability of compensatory mitigation and other related technical information.

Compensatory mitigation may be satisfied through compliance with permit conditions, or other authorizations obtained by the project proponent (e.g., incidental take permit), if these requirements are equally or more effective than the mitigation identified above.

Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands

The project proponent will implement the following measures when working in treatment areas that contain sensitive natural communities identified during surveys conducted pursuant to SPR BIO-3:

- Reference the *Manual of California Vegetation*, Appendix 2, Table A2, *Fire Characteristics* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/) or other best available information to determine the natural fire regime of the specific sensitive natural community type (i.e., alliance) present. The condition class and fire return interval departure of the vegetation alliances present will also be determined.
- Design treatments in sensitive natural communities and oak woodlands to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function of the affected sensitive natural community. Treatments will be designed to replicate the fire regime attributes for the affected sensitive natural community or oak woodland type including seasonality, fire return interval, fire size, spatial complexity, fireline intensity, severity, and fire type as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/). Treatments will not be implemented in sensitive natural communities that are within their natural fire return interval (i.e., time since last burn is less than the average time required for that vegetation type to recover from fire) or within Condition Class 1.
- To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled).
- To the extent feasible, fuel breaks will not remove more than 20 percent of the native vegetation relative cover from a stand of sensitive natural community vegetation in sensitive

natural communities with a rarity rank of S3 (vulnerable) or in oak woodlands. In forest and woodland sensitive natural communities with a rarity rank of S3, and in oak woodlands, only shaded fuel breaks will be installed, and they will not be installed in more than 20 percent of the stand of sensitive natural community or oak woodland vegetation (i.e., if the sensitive natural community covers 100 acres, no more than 20 acres will be converted to create the fuel break).

- Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/).
- Time prescribed herbivory to occur when non-target vegetation is not susceptible to damage (e.g. non-target vegetation is dormant or has completed its reproductive cycle for the year). For example, use herbivores to control invasive plants growing in sensitive habitats or sensitive natural communities when sensitive vegetation is dormant but invasive plants are growing. Timing of herbivory to avoid non-target vegetation will be determined by a qualified botanist, RPF, or biologist based on the specific vegetation alliance being treated, the life forms and life conditions of its characteristic plant species, and the sensitivity of the non-target vegetation to the effects of herbivory.

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

A qualified RPF or botanist with knowledge of the affected sensitive natural community will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat functions of the sensitive natural community or oak woodland. If the project proponent determines the impact on sensitive natural communities or oak woodlands would be less than significant, no further mitigation will be required. If the project proponent determines that the loss or degradation of sensitive natural communities or oak woodlands would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-3b will be implemented.

The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the sensitive natural community or oak woodland would benefit from treatment in the occupied habitat area even though some loss may occur during treatment activities. For a treatment to be considered beneficial to a sensitive natural community or oak woodland, the qualified RPF or botanist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the community (or similar community) has benefitted from increased sunlight due to canopy opening,

eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to sensitive natural communities or oak woodlands, no compensatory mitigation will be required.

Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands

If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under Mitigation Measure BIO-3a, the project proponent will implement the following actions:

- Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by:
  - restoring sensitive natural community or oak woodland functions and acreage within the treatment area;
  - restoring degraded sensitive natural communities or oak woodlands outside of the treatment area at a sufficient ratio to offset the loss of acreage and habitat function; or
  - preserving existing sensitive natural communities or oak woodlands of equal or better value to the sensitive natural community lost through a conservation easement at a sufficient ratio to offset the loss of acreage and habitat function.
- The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on sensitive natural communities or oak woodlands that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and:
  1. For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity.
  2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat.

  The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan in 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 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-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites

The project proponent will implement the following measures while working in treatment areas that contain nursery sites identified in surveys conducted pursuant to SPR BIO-10:

- **Retain Known Nursery Sites.** A qualified RPF or biologist will identify the important habitat features of the wildlife nursery and, prior to treatment activities, will mark these features for avoidance and retention during treatment.
- **Establish Avoidance Buffers.** The project proponent will establish a non-disturbance buffer around the nursery site if activities are required while the nursery site is active/occupied. The appropriate size and shape of the buffer will be determined by a qualified RPF or biologist, based on potential effects of project-related habitat disturbance, noise, visual disturbance, and other factors. No treatment activity will commence within the buffer area until a qualified RPF or biologist confirms that the nursery site is no longer active/occupied. Monitoring of the effectiveness of the non-disturbance buffer around the nursery site by a qualified RPF, biologist, or biological technician during and after treatment activities will be required. If treatment activities cause agitated behavior of the individual(s), the buffer distance will be increased, or treatment activities modified until the agitated behavior stops.

The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to special-status species.

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Appendix A
Database Queries

Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database

Query: Five mile radius

Scientific Name	Common Name	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Actinemys marmorata	northwestern pond turtle	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC
Arborimus pomo	Sonoma tree vole	AMAFF23030	None	None	G3	S3	SSC
Ascaphus truei	Pacific tailed frog	AAABA01010	None	None	G4	S3S4	SSC
Bombus caliginosus	obscure bumble bee	IIHYM24380	None	None	G2G3	S1S2	
Bombus occidentalis	western bumble bee	IIHYM24252	None	Candidate Endangered	G3	S1	
Clarkia amoena ssp. whitneyi	Whitney's farewell-to-spring	PDONA05025	None	None	G5T1	S1	1B.1
Coptis laciniata	Oregon goldthread	PDRAN0A020	None	None	G4?	S3?	4.2
Falco peregrinus anatum	American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	
Gilia capitata ssp. pacifica	Pacific gilia	PDPLM040B6	None	None	G5T3	S3	1B.2
Lathyrus palustris	marsh pea	PDFAB250P0	None	None	G5	S2	2B.2
Montia howellii	Howell's montia	PDPOR05070	None	None	G3G4	S2	2B.2
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	AFCHA02032	Threatened	Threatened	G5T2Q	S2	
Oncorhynchus mykiss irideus pop. 48	steelhead - northern California DPS summer-run	AFCHA0213P	Threatened	Endangered	G5T2Q	S2	
Oncorhynchus mykiss irideus pop. 49	steelhead - northern California DPS winter-run	AFCHA0213Q	Threatened	None	G5T3Q	S3	SSC
Piperia candida	white-flowered rein orchid	PMORC1X050	None	None	G3?	S3	1B.2
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	AAABH01051	None	None	G3T4	S4	SSC
Rhyacotriton variegatus	southern torrent salamander	AAAAJ01020	None	None	G3?	S2S3	SSC
Taricha rivularis	red-bellied newt	AAAAF02020	None	None	G2	S2	SSC
Usnea longissima	Methuselah's beard lichen	NLLEC5P420	None	None	G5	S4	4.2

CNPS Rare Plant Inventory

Search Results

15 matches found. Click on scientific name for details

Search Criteria: , CRPR is one of [1A:1B:2A:2B] , Fed List is one of [FE:FT:FC:FD:None] and State List is one of [CE:CT:CR:CC:CD:None] , 9-Quad include [4012317:4012328:4012421:4012327:3912388:3912387:4012411:4012318]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	perennial herb	(Mar)Apr-Sep	None	CE	G2	S2	1B.1	Yes	1974-01-01	 ©2004 Dean Wm. Taylor
Carex arcta	northern clustered sedge	Cyperaceae	perennial herb	Jun-Sep	None	None	G5	S1	2B.2		2001-01-01	 © 2006 Dean Wm. Taylor
Castilleja litoralis	Oregon coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Jun	None	None	G3	S3	2B.2		2001-01-01	 ©2010 Dana York
Castilleja mendocinensis	Mendocino Coast paintbrush	Orobanchaceae	perennial herb (hemiparasitic)	Apr-Aug	None	None	G2	S2	1B.2		1974-01-01	 ©2015 John Doyen
Clarkia amoena ssp. *whitneyi*	Whitney's farewell-to-spring	Onagraceae	annual herb	Jun-Aug	None	None	G5T1	S1	1B.1	Yes	1980-01-01	No Photo Available

Erythronium oregonum	giant fawn lily	Liliaceae	perennial herb	Mar-Jun(Jul)	None	None	G5	S2	2B.2		2007-07-23	 ©2021 Scot Loring
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	Mar-Jul(Aug)	None	None	G4G5	S3	2B.2		2001-01-01	 ©2007 Steve Matson
Gilia capitata ssp. *pacifica*	Pacific gilia	Polemoniaceae	annual herb	Apr-Aug	None	None	G5T3	S3	1B.2		2001-01-01	 © 2016 Steve Matson
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	Apr-Aug	None	None	G4?	S1S2	2B.3		1994-01-01	 ©2016 Vernon Smith
Lasthenia californica ssp. *macrantha*	perennial goldfields	Asteraceae	perennial herb	Jan-Nov	None	None	G3T2	S2	1B.2	Yes	2001-01-01	 © 2013 John Doyen
Lathyrus palustris	marsh pea	Fabaceae	perennial herb	Mar-Aug	None	None	G5	S2	2B.2		1994-01-01	 © 2016 Keir Morse
Montia howellii	Howell's montia	Montiaceae	annual herb	(Feb)Mar-May	None	None	G3G4	S2	2B.2		1994-01-01	 © 2004 Dean Wm. Taylor
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	(Mar-Apr)May-Sep	None	None	G3?	S3	1B.2		1994-01-01	 ©2016 Barry Rice
Pleuropogon hooverianus	North Coast semaphore grass	Poaceae	perennial rhizomatous herb	Apr-Jun	None	CT	G2	S2	1B.1	Yes	1974-01-01	No Photo Available

Sidalcea malviflora ssp. *patula*	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	(Mar-Apr)May-Aug	None	None	G4G5T2	S2	1B.2		1994-01-01

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Showing 1 to 15 of 15 entries

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Suggested Citation:

California Native Plant Society, Rare Plant Program. 2025. Rare Plant Inventory (online edition, v9.5.1). Website https://www.rareplants.cnps.org [accessed 7 May 2025].

}

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Humboldt County, California

Local office

Arcata Fish And Wildlife Office

(707) 822-7201
(707) 822-8411

1655 Heindon Road

Arcata, CA 95521-4573

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
California Condor Gymnogyps californianus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8193	EXPN
Marbled Murrelet Brachyramphus marmoratus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/4467	Threatened
Northern Spotted Owl Strix occidentalis caurina Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened
Western Snowy Plover Charadrius nivosus nivosus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8035	Threatened
Yellow-billed Cuckoo Coccyzus americanus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus — Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/9743

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Bald and Golden Eagle information is not available at this time

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the

Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (FWS). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The FWS interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Migratory bird information is not available at this time

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then

the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

RIVERINE

- R4SBC
- R4SBA

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix B
Site Photographs

Appendix B. Site Photographs

Vanauken Creek Fuel Break Project			
Photo No.	1	**Photo No.**	2
Date	July 15, 2025	**Date**	July 15, 2025
Aspect	Northeast	**Aspect**	Northwest
			
Douglas fir habitat in the Study Area. Douglas fir trees were predominantly young as seen in the photo. Understory was dominated by California huckleberry and northern bracken fern.		Douglas fir habitat in the Study Area.	
Photo No.	3	**Photo No.**	4
Date	July 15, 2025	**Date**	July 15, 2025
Aspect	North	**Aspect**	South-southeast
			
Montane hardwood habitat in the Study Area. Douglas fir, Pacific madrone and tanoak trees dominated the tree canopy.		Montane hardwood habitat in the Study Area. Douglas fir, Pacific madrone and tanoak trees dominated the tree canopy. Howell's manzanita and California huckleberry dominated the understory.	

Vanauken Creek Fuel Break Project			
Photo No.	5	**Photo No.**	6
Date	July 16, 2025	**Date**	July 16, 2025
Aspect (facing):	North-northeast	**Aspect (facing):**	West
			
Annual grassland habitat in the Study Area.		Annual grassland habitat in the Study Area.	
Photo No.	7	**Photo No.**	8
Date	July 16, 2025	**Date**	July 15, 2025
Aspect	East-southeast; upstream	**Aspect**	South; downstream
			
Vanauken Creek tributary, facing upstream, within the Study Area. A small portion of the tributary intersects with the Study Area. The tributary is highlighted in yellow above.		Vanauken Creek tributary, facing downstream, within the Study Area. A small portion of the tributary intersects with the Study Area. The tributary is highlighted in yellow above.	

Vanauken Creek Fuel Break Project			
Photo No.	9	**Photo No.**	10
Date	July 16, 2025	**Date**	July 16, 2025
Aspect	North	**Aspect**	South; downstream
			
Tributary of Vanauken Creek facing upstream. A large portion of the tributary intersects with the Study Area.		Vanauken Creek tributary facing south and downstream highlighted in yellow above. A large portion of the tributary intersects with the Study Area.	
Photo No.	11	**Photo No.**	12
Date	July 16, 2025	**Date**	July 16, 2025
Aspect	East-southeast	**Aspect**	West-southwest
			
Fuel break areas were dominated by dense vegetation including many dead manzanita trees. Montane hardwood and Douglas fir habitat is present.		Fuel break areas were dominated by dense vegetation including many dead manzanita trees. Montane hardwood and Douglas fir habitat is present.	

Appendix C
Special-status Species Potential to Occur Lists

Appendix C. Special Status Species Tables

The potential for each species to occur in the Study Area was assessed using the criteria outlined below.

None: the area contains a complete lack of suitable habitat, the local range for the species is restricted, and/or the species is extirpated in this region.

Not Expected: suitable habitat or key habitat elements might be present but might be of poor quality or isolated from the nearest extant occurrences, and/or the species is not known to occur in the area.

Possible: presence of suitable habitat or key habitat elements that potentially support the species.

Present: the species was either observed directly or its presence was confirmed by field investigations or in previous studies in the area.

Table 1. Special-Status Plant Species

Scientific Name Common Name	Listing status* (Federal/ State/CNPS)	Life Form	Habitat Association	Potential to Occur in the Project
Astragalus agnicidus Humboldt County milk-vetch	-/SE/1B.1	Perennial herb	Broadleafed upland forest, North Coast coniferous forest. Disturbed openings in partially timbered forest lands; also along ridgelines; south aspects. 525 to 2198 feet elevation. Blooms April to September.	**Possible.** Suitable woodland habitat is present in the Study Area and the Study Area is within the known elevation range of this species. The fuel break areas are located along ridgelines and based on information from the Sanctuary Forest, the northern portion of the Study Area was previously logged (Stillwater Sciences 2021). There are no CNDDB occurrences within five miles; however, there is one Jepson eFlora record within five miles of the Study Area (Jepson Flora Project 2025).
Carex arcta northern clustered sedge	-/-/2B.2	Perennial herb	Bogs and fens, North Coast coniferous forest. Found in wet places especially sphagnum bogs. 195 to 4595 feet elevation. Blooms June to September.	**None.** Suitable habitat is not present in the Study Area.
Castilleja litoralis Oregon coast paintbrush	- / - / 2B.2	Perennial herb (hemiparasitic)	Coastal bluff scrub, coastal dunes, coastal scrub. Sandy sites. 16 to 837 feet elevation. Blooms June.	**None.** Suitable habitat is not present in the Study Area. This Study Area is outside the known elevation range for this species.
Castilleja mendocinensis Mendocino Coast paintbrush	-/-/1B.2	Perennial herb (hemiparasitic)	Coastal bluff scrub, coastal scrub, coastal prairie, closed-cone coniferous forest, coastal dunes. Often on sea bluffs or cliffs in coastal bluff scrub or prairie. 0 to 525 feet elevation. Blooms April to August.	**None.** While closed-cone coniferous forest is present, the Study Area is outside the known elevation range for this species.
Clarkia amoena ssp. *whitneyi* Whitney's farewell-to-spring	- / - / 1B.1	Annual herb	Coastal bluff scrub, coastal scrub. 33 to 328 feet elevation. Blooms June to August.	**None.** Suitable habitat is not present in the Study Area.

Scientific Name Common Name	Listing status* (Federal/ State/CNPS)	Life Form	Habitat Association	Potential to Occur in the Project
Erythronium oregonum giant fawn lily	- / - / 2B.2	Perennial herb	Cismontane woodland, meadows and seeps. Openings in woodland. Sometimes on serpentine; rocky sites. 984 to 4708 feet elevation. Blooms March to June.	**Possible.** Serpentine soil is not present in the Study Area (NRCS 2025). Biologists generally observed dense mixed conifer habitat with thick understory during the biological reconnaissance survey; however, it is likely there are openings within woodland habitat located throughout the Study Area where this species may occur. Study Area is within the known elevation range of this species. There are no known occurrences within five miles of the Study Area.
Erythronium revolutum coast fawn lily	-/-/2B.2	Perennial bulbiferous herb	Bogs and fens, broadleafed upland forest, north coast coniferous forest. Mesic sites; stream banks. 197 to 4610 feet elevation. Blooms March to July.	**Possible.** Vanauken Creek and unnamed tributaries to Vanauken Creek may provide suitable habitat for this species. While there are tributaries of McKee Creek that overlap the Study Area, these waterways were observed to be dry during the biological reconnaissance survey and likely do not provide year-round mesic areas suitable for this species. The Study Area is within the known elevation range for this species. While there are no known occurrences within five miles of the Study Area, it is possible this species may occur in portions of the Study Area that overlap with Vanauken Creek and its unnamed tributaries.

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Life Form**	**Habitat Association**	**Potential to Occur in the Project**
Gilia capitata ssp. pacifica Pacific gilia	-/-/1B.2	Annual herb	Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland. Found on steep slopes, ravines, open flats or coastal bluffs, grassland and dunes. 16 to 4413 feet elevation. Blooms April to August.	**None.** Suitable habitat is not present in the Study Area.
Kopsiopsis hookeri small groundcone	-/-/2B.3	Perennial rhizomatous herb (parasitic)	North coast coniferous forest. Open woods, shrubby places; parasitic, generally on *Gaultheria shallon,* occasionally on *Arbutus menziesii, Arctostaphylos uva-ursi*. 394 to 4708 feet elevation. Blooms April-August.	**Possible.** There are no known occurrences within five miles of the Study Area. However, suitable coniferous forest habitat is present. *Gaultheria shallon* is a common in coniferous forest understory and is known to occur in coastal areas (CNPS Calscape 2025a). Biologists observed *Gaultheria shallon* and *Arbutus menziesii* throughout the Study Area during the biological reconnaissance survey.
Lasthenia californica ssp. *macrantha* perennial goldfields	-/-/1B.2	Perennial herb	Coastal bluff scrub, coastal dunes, coastal scrub. 16 to 607 feet elevation. Blooms January-November.	**None.** Suitable habitat is not present in the Study Area.
Lathyrus palustris marsh pea	-/-/2B.2	Perennial herb	Bogs and fens, lower montane coniferous forest, marshes and swamps, north coast coniferous forest, coastal prairie and coastal scrub. Moist coastal areas. 7 to 459 feet elevation. Blooms March-August.	**None.** While suitable moist north coast coniferous forest habitat is present, the Study Area is not within the known elevation range of this species. There is one historic (1980) CNDDB occurrence approximately 4.9 miles southwest of the Study Area, however, the Study Area is approximately 500 feet higher in elevation than this species known elevation range.

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Life Form**	**Habitat Association**	**Potential to Occur in the Project**
Montia howellii Howell's montia	-/-/2B.2	Annual herb	Meadows and seeps, north coast coniferous forest, vernal pools. Vernally wet sites; often on compacted soil. 33 to 3297 feet elevation. Blooms March-May.	**Possible.** There is one historic (1923) CNDDB occurrence mapped approximately 0.75 mile south of the Study Area and the CNDDB record states the species was found on wet ground along a creek. North coast coniferous forest is present in the Study Area and wet areas along Vanauken Creek, and associated tributaries may provide suitable habitat for Howell's montia.
Piperia candida white-flowered rein orchid	-/-/1B.2	Perennial herb	North coast coniferous forest, lower montane coniferous forest, broadleafed upland forest. Sometimes on serpentine soil. Forest duff, mossy banks, rock outcrops, and muskeg. 148 to 5299 feet elevation. Blooms May-September.	**Possible.** Suitable coniferous forest habitat is present in the Study Area and the Study Area is within the known elevation range for this species. There are thirteen CNDDB occurrences from 2012 and 2019 mapped with five miles of the Study Area. There are two occurrences (2019) mapped within 1.5 miles east and southeast of the Study Area.
Pleuropogon hooverianus North Coast semaphore grass	-/ST/1B.1	Perennial rhizomatous herb	Broadleafed upland forest, meadows and seeps, North Coast coniferous forest. Wet grassy, usually shady areas, sometimes freshwater marsh; associated with forest environments. Blooms April-June. 35 to 2200 feet elevation.	**Not expected.** This species has a limited distribution range and is primarily known from Marin, Sonoma and Mendocino Counties, with one occurrence in Humboldt County California Department of Fish and Wildlife 2014; Calflora 2025). The nearest known occurrence is mapped approximately 9.2 miles east of the Study Area. Suitable habitat may be present in the grassland habitat in the southern portion of the Study Area.

Scientific Name **Common Name**	**Listing status* (Federal/ State/CNPS)**	**Life Form**	**Habitat Association**	**Potential to Occur in the Project**
Sidalcea malviflora ssp. *patula* Siskiyou checkerbloom	-/-/1B.2	Perennial rhizomatous herb	Coastal bluff scrub, coastal prairie, north coast coniferous forest. Open coastal forest; bluffs; roadcuts. 16 to 4117 feet elevation. Blooms May-August.	**Not expected.** Suitable open coastal forest habitat is limited in the Study Area but may be present among openings of grassland habitat in the southern portion of the Study Area. The nearest CNDDB occurrences are mapped approximately nine miles east of the Study Area; and indicate the species was found along meadow edges, weedy pasture fence lines, and with poison oak and other brush on the edge of a sloping wet meadow.

* List of Abbreviations for Species Status follow below:

FE = Federal Endangered
FT = Federal Threatened
FC = Federal Candidate
SC = State Candidate
SE = State Endangered (California)
ST = State Threatened (California)
SR = State Rare (California)
SSC = Species of Special Concern
FP= Fully Protected

California Rare Plant Rank (CRPR)
1A = Presumed extirpated in California and rare or extinct elsewhere
1B = Rare, threatened, or endangered in California and elsewhere
2A = Presumed extirpated in California but common elsewhere
2B = Rare, threatened, or endangered in California but more common elsewhere

CRPR Threat Rank
0.1 = Seriously threatened in California
0.2 = Moderately threatened in California
0.3 = Not very threatened in California

References:

California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database.

Table 2. Special-Status Wildlife Species

Scientific name	Listing status* (Federal/ State)	Habitat	Potential to Occur in the Project
Invertebrates			
Bombus occidentalis western bumble bee	- /SC	Open grasslands, shrublands, chaparral, desert margins, including Joshua tree and creosote scrub, and semi-urban settings. Once common and widespread, species has declined precipitously from central CA to southern B.C. Western bumble bee populations in California are currently largely restricted to high elevation sites in the Sierra Nevada and a few records on the northern California coast. Food plant include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum*.	**None.** The Study Area is within the historic range of this species; however, it is not within the current mapped range (CDFW 2025b).
Danaus plexippus monarch butterfly	FPT/-	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.	**None (overwintering sites)/Possible (breeding/migrating).** There are no CNDDBB occurrences within five miles of the Study Area, however, this species is listed on the IPaC resource list. This species is not known to overwinter in Humboldt County, generally overwintering in wooded sites from Mendocino County south to Baja, California. However, monarch butterflies are known to breed in the summer and spring in Humboldt County (Jepson et al. 2015) and may potentially migrate through the area. Narrow-leaf milkweed (*Asclepias fascicularis*) is native to Humboldt County and is known to grow in grassland habitat and while no milkweed plants were observed during the biological reconnaissance survey, it is possible it may occur in the meadow in the southern/central portion of the Study Area (CNPS Calscape 2025b).

Scientific name	Listing status* (Federal/ State)	Habitat	Potential to Occur in the Project
Amphibians			
Ascaphus truei Pacific tailed frog	-/SSC	Inhabit cold, perennial streams in the mountains with large stone or cobble bottoms. Known to prefer streams devoid of fish and with undisturbed forest canopy. Predominantly nocturnal, and while known to forage on land during wet conditions they are primarily aquatic.	**None.** This species requires perennial streams of low temperatures less than 22 degrees Celsius (preference of less than 15 degrees Celsius) in steep-walled valleys (Zeiner et al. 1988-1990) which are not present in the Study Area.
Rana boylii pop. 1 foothill yellow-legged frog – north coast DPS	- / SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Need at least some cobble-sized substrate for egg-laying. Need at least 15 weeks to attain metamorphosis.	**Present.** There is one CNDDB occurrence from 2018 mapped to Vanauken Creek within the Study Area. The record indicates one adult was observed, but it was recorded that numerous foothill yellow-legged frogs were observed within a 1200-meter survey reach along Vanauken Creek. Suitable overwintering and dispersal habitat may also be present in tributaries of McKee Creek and Vanauken Creek within the Study Area during the wet season. During a wet year, this species may be found year-round in the portion of Vanauken Creek that overlaps the southern portion of the Study Area.
Rhyacotriton variegatus southern torrent salamander	- / SSC	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats; old growth forest. Found in cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rock within trickling water.	**Not expected.** This species is predominantly aquatic. In northwestern California, this species exhibits a strict association with headwaters and low order tributaries (Welsh et al. 1996). This species is commonly associated with high-gradient streams which are not present in the Study Area (Thomson et al. 2016). Riparian corridors are important foraging habitat for this species (USFWS 2000). There is a CNDDB occurrence (late 1980s/early 1990s) mapped approximately 1.75 miles west of the Study Area. The record indicates the detection was made in Nooning Creek, a tributary of the Mattole River.
Taricha rivularis red-bellied newt	-/SSC	Broadleaved upland forest, north coast coniferous forest, redwood, riparian forest, and riparian woodland. Coastal drainages from Humboldt County south to Sonoma County, inland to Lake	**Possible.** Suitable habitat is present in the Study Area. The nearest CNDDB occurrence (1974) is mapped approximately 0.5 mile west of the Study Area. The record

Scientific name	Listing status* (Federal/ State)	Habitat	Potential to Occur in the Project
		County. Isolated population of uncertain origin in Santa Clara County. Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	indicates two specimens were collected near the intersection of Shelter Cove Road and Mattole River.
Reptiles			
Actinemys marmorata northwestern pond turtle	FPT/SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Need basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 km from water for egg-laying.	**Not expected.** There is one CNDDB occurrence (2006) mapped approximately 4.75 mile north of the Study Area; the occurrence is mapped to the Mattole River. Numerous observations from iNaturalist are present within the vicinity of the Study Area in Mattole River and Painter Creek (iNaturalist 2025). Vanauken Creek, associated tributaries and associated tributaries of McKee Creek did not provide suitable aquatic habitat for the species based on a lack of suitable basking sites. However, this species is known to travel up to 500 meters to overwinter in shrubby/forested areas where a deep layer of detritus is present (Western Pond Turtle Range-wide Conservation Coalition 2020). The grassy meadow within 0.3 km of the Mattole River and forest habitat may provide suitable upland habitat for this species.
Fish			
Oncorhynchus kisutch pop. 2 coho salmon - southern Oregon / northern California ESU	FT/ST	Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water and sufficient dissolved oxygen.	**Present.** There are two CNDDB occurrences from 1994 mapped approximately 2.5 miles northwest of the Study Area; the occurrences are mapped to Eubanks Creek and Big Finley Creek above the confluence with the Mattole River. This species is known to spawn and rear in the Mattole River as well as its tributaries including Vanauken Creek (Stillwater Sciences 2024). This species may occur in the portions of Vanauken Creek and its tributaries that overlap the southern portion of the Study Area.

Scientific name	Listing status* (Federal/ State)	Habitat	Potential to Occur in the Project
Oncorhynchus mykiss irideus pop. 48 steelhead - northern California DPS summer-run	FT / -	Summer-run steelhead are known to migrate further inland than winter-run steelhead. Seek refuge in deep pools with a preference for pools that have large boulders or woody debris for protection from predators. DPS includes Redwood Creek, Mad River, Eel River and Mattole Rivers. Spawn in December to February. Tolerant of water temperatures up to 73 degrees Fahrenheit.	**Present.** This species is known to occur in the Mattole River and its tributaries. Deep pools suitable for spawning during the summer months may be present along Vanauken Creek and its tributaries.
Oncorhynchus mykiss irideus pop. 49 steelhead - northern California DPS winter-run	FT/SSC	DPS includes Redwood Creek, Eel River and Mattole Rivers and their tributaries. Winter run steelhead enter freshwater environments such as estuaries and rivers sexually mature. Generally, factors such as temperature and water flow are not significant to migration unlike the summer-run DPS. Spawns December through April.	**Present.** There is a CNDDB occurrence from 2021 mapped to Mattole River and its tributaries including Vanauken Creek. The record indicates in 2015 surveyors estimated the spawning population to be "likely more than 1000." Suitable habitat is present in Vanauken Creek in the southern portion of the Study Area.
Oncorhynchus tshawytscha pop. 17 Chinook salmon – California coastal ESU	FT/-	Federal listing refers to wild spawned, coastal, spring and fall runs between Redwood Cr, Humboldt Co and Russian River, Sonoma Co.	**Not expected.** While there are no CNDDB occurrences for this species within five miles, the Study Area is mapped to Essential Fish Habitat for chinook salmon. Marginal spawning and rearing habitat is present in Vanauken Creek (NOAA 2005).
Birds			
Brachyramphus marmoratus Marbled murrelet	FT/SE	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	**None.** Suitable old-growth redwood-dominated forest is not present in the Study Area.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT/SE	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	**None.** Suitable riparian habitat is not present in the Study Area. There are no known occurrences within five miles of the Study Area.

Scientific name	Listing status* (Federal/ State)	Habitat	Potential to Occur in the Project
Charadrius alexandrinus nivosus Western snowy plover	FT / SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.	**None.** Suitable habitat is not present in the Study Area.
Gymnogyps californianus California condor	FE/SE	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. forages up to 100 miles from roost/nest.	**None.** Suitable habitat is not present in the Study Area.
Strix occidentalis caurina Northern spotted owl	FT/ST	Inhabit old-growth forests or mixed stands of old-growth and mature trees including Douglas-fir, redwood forests, mixed evergreen and hardwood, ponderosa pine, white fir, and grand fir. Occasionally found in younger forests with patches of big trees.	**Present.** Eight positive occurrences are mapped within or in the immediate vicinity of the Study Area by the CDFW Spotted Owl Observations Database. Two of the eight occurrences from 2000 are recorded as nests and three occurrences are recorded as activity centers. One of the nest occurrences records a nest in a Douglas fir tree. An additional occurrence within five miles indicates a nest in a Pacific madrone tree. While there is a lack of old-growth forest present, biologists observed mature Douglas fir, Pacific madrone and tanoak trees that may provide suitable nesting habitat for this species. There is also foraging habitat located throughout the Study Area.
Mammals			
Arborimus pomo Sonoma tree vole	- / SSC	North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood and montane hardwood-conifer forests. Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	**Possible.** There is suitable habitat for Sonoma tree vole in the Study Area. The nearest CNDDB occurrence (1994) is mapped approximately 1.5 miles southeast of the Study Area; the record indicates a nest and resin ducts were observed in Douglas-fir and tanoak saplings. A vole was observed in the resin ducts.

* Abbreviations for Federal and State Species Status:

FE = Federal endangered	SE = State endangered
FT = Federal threatened	ST = State threatened
FC = Federal candidate	SC = State candidate
FPT = Federal proposed threatened	SSC = Species of special concern (CDFW)

Scientific name	Listing status* (Federal/ State)	Habitat	Potential to Occur in the Project
FP = Fully protected (CDFW) Habitat Source: California Department of Fish and Wildlife (CDFW). 2025. California Natural Diversity Database			

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Appendix D
Plant Species List

Appendix D. Plant Species Observed

Table 1. Plant Species Observed

Scientific name	Common name	Native Species
Acer macrophyllum	Big-leaf maple	Yes
Agrostis stolonifera	Creeping bent	No*
Alnus rhombifolia	White alder	Yes
Alnus rubra	Red alder	Yes
Aralia californica	Elk clover	Yes
Arbutus menziesii	Pacific madrone	Yes
Arctostaphylos hispidula	Howell's manzanita	Yes
Arctostaphylos manzanita	Common manzanita	Yes
Baccharis pilularis	Coyote brush	Yes
Boykinia occidentalis	Coastal brookfoam	Yes
Carex ssp.	Sedge ssp.	
Ceanothus incanus	Coast whitethorn	Yes
Centaurium tenuiflorum	Slender centaury	No
Circium vulgare	Bull thistle	No*
Clinopodium douglasii	Yerba buena	Yes
Cynosurus echinatus	Bristly dogtail grass	No*
Danthonia californica	California oat grass	Yes
Euonymus occidentalis var. occidentalis	Western burning bush	Yes
Festuca myuros	Rattail sixweeks grass	No*
Frangula californica	California coffee berry	Yes
Gaultheria shallon	Salal	Yes
Genista monspessulana	French broom	No*
Helminthotheca echioides	Bristly ox-tongue	No*
Hypericum perforatum subsp. *Perforatum*	Klamathweed	No*
Juncus patens	Spreading rush	Yes
Linum bienne	Pale flax	No
Notholithocarpus densiflorus var. *densiflorus*	Tanoak	Yes
Osmorhiza berteroi	Sweet cicely	Yes
Pectiantia ovalis	Coastal miterwort	Yes
Phacelia bolanderi	Bolander's phacelia	Yes
Phalaris aquatica	Harding grass	No*
Plantago major	Common plantain	No
Polystichum munitum	Western sword fern	Yes
Pseudotsuga menziesii var. *menziesii*	Douglas-fir	Yes
Pteridium aquilinum var. *pubescens*	Northern bracken fern	Yes
Quercus chrysolepis	Canyon live oak	Yes
Rosa gymnocarpa	Wood rose	Yes
Rubus ursinus	California blackberry	Yes
Rumex acetosella	Sheep sorrel	No*
Sequoia sempervirens	Coast redwood	Yes
Solanaceae ssp.	Nightshade ssp.	
Stachys rigida	Rough hedgenettle	Yes

Scientific name	Common name	Native Species
Thelesperma megapotamicum	Rayless greenthread	No
Toxicodendron diversilobum	Western poison oak	Yes
Umbellularia californica	California laurel	Yes
Vaccinium ovatum	California huckleberry	Yes
Verbena lasiostachys	Western vervain	Yes
Woodwardia fimbriata	Giant chain fern	Yes
* = invasive (Cal-IPC rating)		

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ATTACHMENT C – ARCHAEOLOGICAL SURVEY REPORT