

Attachment A

Mitigation Monitoring and
Reporting Program for the
UC Santa Cruz Wildfire
Vegetation Management Project

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MITIGATION MONITORING AND REPORTING PROGRAM

INTRODUCTION

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

PURPOSE OF MITIGATION MONITORING AND REPORTING PROGRAM

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

ROLES AND RESPONSIBILITIES

Unless otherwise specified herein, University of California, Santa Cruz (UC Santa Cruz) is responsible for taking all actions necessary to implement the mitigation measures under its jurisdiction according to the specifications provided for each measure and for demonstrating that the action has been successfully completed. UC Santa Cruz will be responsible for implementation of mitigation measures pursuant to Section 15097 of the State CEQA Guidelines.

REPORTING

UC Santa Cruz shall document and describe the compliance of the project treatment work with the required SPRs and mitigation measures either by adapting the project-specific MMRP table or preparing a separate post-project implementation report pursuant to the requirements of SPR AD-7 for individual treatments within the project area.

Pursuant to the Resource Conservation District of Santa Cruz County’s (RCDSCC’s) certified Public Works Plan (PWP), RCDSCC shall also provide monitoring reports to the Coastal Commission. In addition, 5 years following certification of the PWP, RCDSCC shall prepare a five-year programmatic review identifying at a minimum: the status of individual projects implemented under the PWP, as well as projects expected to be implemented under the PWP and level of program completion (e.g., number of acres treated, high priority areas for the subsequent

five years; collective monitoring results; constraints and lessons learned; and program success). RCDSCC will partner with UC Santa Cruz to implement the responsibilities outlined in the PWP. In coordination with UC Santa Cruz, RCDSCC will maintain sufficient oversight to confirm that all work is consistent with the PWP and Notice of Impending Development (NOID).

MITIGATION MONITORING AND REPORTING PROGRAM TABLE

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

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

QUALIFICATION REQUIREMENTS FOR BIOLOGICAL AND CULTURAL RESOURCE MEASURES

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

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

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

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

Qualified RPF or Biologist: To be qualified, an RPF or biologist would hold a wildlife biology, botany, ecology, forestry, or other relevant degree from an accredited university and: 1) be knowledgeable in relevant species life histories and ecology, 2) be able to correctly identify relevant species and habitats, 3) have experience conducting field surveys of relevant species or resources, 4) be knowledgeable about survey protocols, 5) be knowledgeable about state and federal laws regarding the protection of special-status species, and 6) have experience with CDFW's California Natural Diversity Database (CNDDDB) and Biogeographic Information and Observation System (BIOS). The project proponent will review the resume and approve the qualifications of RPFs or biologists. If species-specific protocol surveys are performed, surveys would be conducted by qualified RPFs or biologists with the minimum qualifications required by the appropriate protocols, including having CDFW or USFWS approval to conduct such surveys, if required by certain protocols.

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

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
Administrative Standard Project Requirements			
<p>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.</p>	Prior to treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	Prior to treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p> <p>Project-Specific Guidance to Implement SPR AD-3 As a university of California, UC Santa Cruz has constitutional autonomy and is not subject to the City or County General Plan or zoning ordinances. When implementing the proposed project and SPR AD-3, City and County plans, policies, and ordinances will not apply.</p>	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>SPR AD-4: Public Notifications for Prescribed Burning: At least three days prior to the commencement of prescribed burning operations, the project proponent will: 1) post signs along the closest public roadway to the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or smoke concerns; 2) publish a 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.</p>	At least three days prior to the commencement of prescribed burning operations.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>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.</p>	<p>During treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>SPR AD-6: Public Notifications for Treatment Projects One to three days prior to the commencement of a treatment activity, the project proponent will post signs in a conspicuous location near the treatment area describing the activity and timing, and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or concerns. This SPR applies to all treatment activities and all treatment types, including treatment maintenance. Prescribed burning is subject to the additional notification requirements of SPR AD-4.</p>	<p>One to three days prior to the commencement of a treatment activity.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>SPR AD-7: Provide Information on Proposed, Approved, and Completed Treatment Projects For any vegetation treatment project using the CalVTP Program EIR for CEQA compliance, the project proponent will provide the information listed below to the Board of Forestry and Fire Protection (Board) or CAL FIRE during the proposed, approved, and completed stages of the project. The Board or CAL FIRE will make this information available to the public via an online database or other mechanism.</p> <p>Information on proposed projects (PSA in progress):</p> <ul style="list-style-type: none"> ▶ GIS data that include project location (as a point), or project latitude/longitude; ▶ project size (typically acres); ▶ treatment types and activities; and ▶ contact information for a representative of the project proponent. <p>The project proponent will provide information on the proposed project to the Board or CAL FIRE as early as feasible in the planning phase. The project proponent will provide this information to the Board or CAL FIRE with sufficient lead time to allow those agencies to make the information available to the public at least two weeks prior to project approval. The project proponent may also make information available to the public via other mechanisms (e.g., the proponent’s own website).</p> <p>Information on approved projects (PSA complete):</p> <ul style="list-style-type: none"> ▶ A completed PSA Environmental Checklist; ▶ A completed Mitigation Monitoring and Reporting Program (using Attachment A to the Environmental Checklist); ▶ GIS data that include a polygon(s) of the project area, showing the extent of each treatment type included in the project (ecological restoration, fuel break, WUI fuel reduction) 	<p>During the proposed, approved, and completed stages of the project.</p> <p>Information on the proposed project (PSA in progress) was submitted to the Board on July 23, 2025.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>Information on completed projects (following initial treatment):</p> <ul style="list-style-type: none"> ▶ GIS data that include a polygon(s) of the treated area, showing the extent of each treatment type implemented (ecological restoration, fuel break, WUI fuel reduction) ▶ A post-project implementation report (referred to by CAL FIRE as a Completion Report) that includes <ul style="list-style-type: none"> ▪ Size of treated area (typically acres); ▪ Treatment types and activities; ▪ Dates of work; ▪ A list of the SPRs and mitigation measures that were implemented ▪ Any explanations regarding implementation if required by SPRs and mitigation measures (e.g., explanation for feasibility determination required by SPR BIO-12; explanation for reduction of a no-disturbance buffer below the general minimum size described in Mitigation Measures BIO-1a and BIO-2b). <p>This SPR applies to all treatment activities and all treatment types, including treatment maintenance.</p>			
<p>SPR AD-8: Request Access for Post-Treatment Assessment</p> <p>For CAL FIRE projects, during contract development, CAL FIRE will include access to the treated area over a prescribed period (usually up to three years) to assess treatment effectiveness in achieving desired fuel conditions and other CalVTP objectives as well as any necessary maintenance, as a contract term for consideration by the landowner. For public landowners, access to the treated area over a prescribed period will be a requirement of the executed contract. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.</p>	Following treatment	UC Santa Cruz	UC Santa Cruz
<p>SPR AD-9: Obtain a Coastal Development Permit for Proposed Treatment Within the Coastal Zone Where Required</p> <p>When planning a treatment project within the Coastal Zone, the project proponent will contact the local Coastal Commission district office, or applicable local government to determine if the project area is within the jurisdiction of the Coastal Commission, a local government with a certified Local Coastal Program (LCP), or both. All treatment projects in the Coastal Zone will be reviewed by the local Coastal Commission district office or local government with a certified LCP (in consultation with the local Coastal Commission district office regarding whether a Coastal Development Permit (CDP) is required). If a CDP is required, the treatment project will be designed to meet the following conditions:</p> <ol style="list-style-type: none"> i. The treatment project will be designed in compliance with applicable provisions of the Coastal Act that provide substantive performance standards for the protection of potentially affected coastal resources, if the treatment activity will occur within the original jurisdiction of the Commission or an area of a local coastal government without a certified LCP; and ii. The treatment project will be designed in compliance with the applicable provisions of the certified LCP, specifically the substantive performance standards for the protection of potentially affected coastal resources, if the treatment activity will occur within the jurisdiction of a local coastal government with a certified LCP. <p>This SPR applies to all treatment activities and all treatment types, including treatment maintenance.</p>	<p>Prior to all treatment activities.</p> <p>Coastal Act Compliance for this project is achieved through Coastal Commission review of the PSA and Coastal VTS and determination that the project is consistent with the Public Works Plan.</p>	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
Aesthetic and Visual Resource Standard Project Requirements			
<p>SPR AES-1: Vegetation Thinning and Edge Feathering The project proponent will thin and feather adjacent vegetation to break up or screen linear edges of the clearing and mimic forms of natural clearings as reasonable or appropriate for vegetation conditions. In general, thinning and feathering in irregular patches of varying densities, as well as a gradation of tall to short vegetation at the clearing edge, will achieve a natural transitional appearance. The contrast of a distinct clearing edge will be faded into this transitional band. This SPR only applies to mechanical and manual treatment activities and all treatment types, including treatment maintenance.</p>	During mechanical and manual treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	During all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	During all treatment activities.	UC Santa Cruz	UC Santa Cruz
Chaparral and Coastal Sage Scrub Standard Project Requirement			
<p>SPR CHAP/CSS-1: Chaparral and Coastal Sage Scrub To be consistent with the Writ of Mandate and its Exhibit A (dated November 14, 2025) in Case No. 37-2020-00005203-CU-TT-CT, for the purposes of this SPR only, chaparral and coastal sage scrub are defined as follows: Chaparral: Dominated by evergreen, drought-tolerant shrubs that are typically 1.5–3 meters tall (Barbour, Keeler-Wolf, and Schoenherr 2007) with stiff branches, and sclerophyllous (i.e., hard leaved) leaves.</p> <ul style="list-style-type: none"> ▶ Chaparral alliances are listed in level 1, 2 of the Key to Shrublands in the California Native Plant Society's (CNPS) Manual of California Vegetation. This definition does not include alliances dominated by coyote brush (<i>Baccharis pilularis</i>). ▶ Dominant plant species may include manzanita (<i>Arctostaphylos</i> spp.), ceanothus (<i>Ceanothus</i> spp.), chamise (<i>Adenostoma fasciculatum</i>), redshank (<i>Adenostoma sparsifolium</i>), sugarbush (<i>Rhus ovata</i>), scrub oak species (e.g., <i>Quercus berberidifolia</i>, <i>Q. dumosa</i>, <i>Q. durata</i>), Mission manzanita (<i>Xylococcus bicolor</i>), mountain mahogany (<i>Cercocarpus montanus</i>), hollyleaf cherry (<i>Prunus ilicifolia</i>), redberry (<i>Rhamnus crocea</i>), toyon (<i>Heteromeles arbutifolia</i>) and evergreen buckthorn (<i>Rhamnus ilicifolia</i>). <p>Coastal sage scrub: Dominated by drought-tolerant, deciduous, lower-growing (typically 1–1.5 meters tall) (Barbour, Keeler-Wolf, and Schoenherr 2007), shallow-rooted, aromatic shrubs with soft, flexible branches, and soft, deciduous leaves that drop off in response to drought.</p>	During all treatment activities.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<ul style="list-style-type: none"> ▶ Coastal sage scrub alliances are listed in level 15 and 15' under 1, 2', 12', 13', 14 of the Key to Shrublands in the CNPS Manual of California Vegetation. This definition does not include alliances dominated by coyote brush (<i>Baccharis pilularis</i>) or nonnative species (e.g., broom [<i>Genista monspessulana</i>, <i>Cytisus scoparius</i>], <i>Cotoneaster</i> spp.). ▶ Dominant or diagnostic plant species may include: California sagebrush (<i>Artemisia californica</i>), white sage (<i>Salvia apiana</i>), black sage (<i>Salvia mellifera</i>), purple sage (<i>Salvia leucophylla</i>), California brittle bush (<i>Encelia californica</i>), buckwheat (<i>Eriogonum</i> spp.), monkey flower (<i>Diplacus</i> spp.), and stands with other species dominant to co-dominant listed in level 15' under 1, 2', 12', 13', 14. <p>A stand of chaparral or coastal sage scrub is defined as a spatially continuous unit of shrub vegetation composed of chaparral and/or coastal sage scrub alliances. A chaparral and/or coastal sage scrub stand may be surrounded by forest, grassland, or woodland vegetation.</p> <p>All references to the CNPS Manual of California Vegetation are to the most current online edition, available at https://vegetation.cnps.org/.</p> <p>As required in Exhibit A of the Writ of Mandate, treatments in chaparral and coastal sage scrub will be limited to activities listed below:</p> <ul style="list-style-type: none"> ▶ New linear, accessible strategic fuel breaks located along ridgelines, roadsides, and in other critical defensive locations determined by responsible fire agencies, provided that long-term maintenance of flammable nonnative vegetation is included. Such fuel break treatments shall be the minimum width necessary to provide for firefighter safety, operational procedures, and back firing operations, and shall not exceed 300 feet in width; ▶ Maintenance of existing fuel breaks and prior treatment areas to control flammable, nonnative invasive plants; ▶ Wildland-Urban Interface (WUI) fuel reduction treatment located within 1,000 feet of the Interface layer mapped in the CAL FIRE WUI layer (WUI25 1) (available at: https://hub-calfire-forestry.hub.arcgis.com/maps/ab3148666b084efcbe3bec0bf6af7441/explore?location=36.998595%2C-121.992016%2C13), provided that long-term maintenance of flammable, non-native vegetation is included, with a preference for hand thinning. ▶ Ecological restoration treatments consisting of removal of flammable, non-native vegetation; and/or ▶ Treatments where the stand of chaparral or coastal sage scrub has a state rarity rank of S4 (apparently secure) or S5 (demonstrably secure) according to the California Department of Fish and Wildlife (available at: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#lists), and has generated following a fire within the last 15 years in an area previously characterized by woodland or forest before the fire, as evidenced by satellite imagery and as defined in accordance with the Key to Main Vegetation Categories in the CNPS Manual of California Vegetation. 			

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
Air Quality Standard Project Requirements			
<p>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.</p>	During all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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. An example smoke management plan is in Appendix PD-2. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.</p>	Prior to prescribed burn treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	Prior to prescribed burn treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>SPR AQ-4: Minimize Dust To minimize dust during treatment activities, the project proponent will implement the following measures:</p> <ul style="list-style-type: none"> ▶ 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. 	During all treatment activities.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<ul style="list-style-type: none"> ▶ 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. <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>			
<p>SPR AQ-5: Avoid Naturally Occurring Asbestos The project proponent will avoid ground-disturbing treatment activities in areas identified as likely to contain naturally occurring asbestos (NOA) per maps and guidance published by the California Geological Survey, unless an Asbestos Dust Control Plan (17 CCR Section 93105) is prepared and approved by the air district(s) with jurisdiction over the treatment area. Any NOA-related guidance provided by the applicable air district will be followed. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>	During all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>SPR AQ-6: Prescribed Burn Safety Procedures Prescribed burns planned and managed by non-CAL FIRE crews will follow all safety procedures required of CAL FIRE crew, including the implementation of an approved Incident Action Plan (IAP). The IAP will include the burn dates; burn hours; weather limitations; the specific burn prescription; a communications plan; a medical plan; a traffic plan; and special instructions such as minimizing smoke impacts to specific local roadways. The IAP will also assign responsibilities for coordination with the appropriate air district, such as conducting onsite briefings, posting notifications, weather monitoring during burning, and other burn related preparations. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.</p>	During prescribed burn treatment activities.	UC Santa Cruz	UC Santa Cruz
Archaeological, Historical, and Tribal Cultural Resources Standard Project Requirements			
<p>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 with applicable agency guidance. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>	<p>Prior to all initial treatment activities. Not required prior to maintenance treatments if records search remains valid.</p> <p>A complete record search of the 2,017-acre project area has been conducted; see PSA/Addendum for a summary of results. Compliance with this SPR is complete.</p>	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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:</p> <ul style="list-style-type: none"> ▶ 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. <p>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.</p>	<p>Prior to all initial treatment activities. Not required prior to maintenance treatments if records search remains valid. Outreach to the NAHC has occurred, Tribes have been contacted and a SLF query has been completed; see PSA for a summary of consultation and Sacred Lands File query results.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>SPR-CUL-3: Pre-field Research The project proponent will conduct research prior to implementing treatments as part of the cultural resource investigation. The purpose of this research is to properly inform survey design, based on the types of resources likely to be encountered within the treatment area, and to be prepared to interpret, record, and evaluate these findings within the context of local history and prehistory. The qualified archaeologist and/or archaeologically-trained resource professional will review records, study maps, read pertinent ethnographic, archaeological, and historical literature specific to the area being studied, and conduct other tasks to maximize the effectiveness of the survey. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>	<p>Prior to all initial treatment activities. Not required prior to maintenance treatments if research remains valid.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>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.</p>	<p>Prior to and during all treatment activities. Not required prior to maintenance treatments if initial surveys remain valid.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>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.</p>	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>SPR CUL-6: Treatment of Tribal Cultural Resources The project proponent, in consultation with the culturally affiliated tribe(s), will develop effective protection measures for important tribal cultural resources located within treatment areas. These measures may include adjusting the treatment location or design to entirely avoid cultural resource locations or changing treatment activities so that damaging effects to cultural resources will not occur. The project proponent will provide the tribe(s) the opportunity to submit comments and participate in consultation to resolve issues of concern. The project proponent will defer implementing the treatment until the tribe approves protection measures, or if agreement cannot be reached after a good-faith effort, the proponent determines that any or all feasible measures have been implemented, where feasible, and the resource is either avoided or protected. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
Biological Resources Standard Project Requirements			
<p>SPR BIO-1: Review and Survey Project-Specific Biological Resources</p> <p>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 Program EIR 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, CNDDDB, 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:</p>	<p>Prior to treatment activities.</p> <p>Initial data review and reconnaissance-level survey have been conducted; see PSA/Addendum for summary of results.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>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:</p> <ul style="list-style-type: none"> 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). <p>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.</p>	<p>Prior to and during treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>Project-Specific Guidance to Implement SPR BIO-1</p> <p><u>Special-Status Plants</u></p> <p>For special-status plants not listed under CESA or ESA, to avoid impacts on herbaceous annual species, stump-sprouting species, or geophyte species (e.g., perennial rhizomatous herbs), only non-ground-disturbing treatment activities (i.e., manual treatments, broadcast burning, targeted herbicide application, and prescribed herbivory) will be implemented and only during the dormant season for these species (e.g., when the plant has no aboveground parts), if feasible, provided the treatment will not alter habitat in a way that would make it unsuitable for the special-status plants to reestablish following treatment, or destroy seedbanks, stumps, or roots, rhizomes, bulbs and other underground parts of these species. If the limited operating period for herbaceous annual species, stump-sprouting species, or geophyte species (i.e., only non-ground-disturbing treatment activities conducted during the dormant season) is determined to be infeasible, then protocol-level surveys will be required per SPR BIO-7. Note that ground-disturbing treatment activities (i.e., mechanical treatments) and pile burning may result in impacts on these plant species even when dormant and will not be conducted without prior implementation of SPR BIO-7.</p> <p><u>Special-Status Wildlife</u></p> <ul style="list-style-type: none"> ▶ To avoid impacts on monarch butterfly, the following measures will be implemented: <ul style="list-style-type: none"> ▪ To avoid impacts on overwintering monarch butterflies, prescribed burning, mechanical, manual, herbicide, and prescribed herbivory treatments would be avoided within documented monarch overwintering stands or forested habitats potentially suitable for overwintering monarchs as determined by a qualified RPF or biologist. If it is not feasible to avoid treatments within documented or potential overwintering habitat, SPR BIO-10 will be implemented. ▪ To avoid impacts on breeding monarch butterflies, prescribed burning, mechanical, manual, and herbicide treatments will be conducted in grassland, shrub, and oak woodland habitat outside of the season when monarch eggs, larvae, and pupae are likely to be present on milkweed host plants (i.e., treatment will be conducted outside of March 15-October 31) (Xerces 2019). This period may be adjusted by a qualified biologist or RPF to reflect local timing of monarch breeding. If it is not feasible to avoid treatments during this sensitive season, then SPR BIO-10 will be implemented. ▶ To avoid impacts on Ohlone tiger beetle pursuant to Mitigation Measure BIO-2f treatments will not occur within habitat for the species. If it is infeasible to avoid treatments within habitat for the species Mitigation Measure BIO-2c will apply. ▶ To avoid impacts on overwintering burrowing owl, a limited operating period for the construction of control lines and staging areas for prescribed burning; mechanical treatments; manual treatments; and the placement of fencing, pens, and other infrastructure for prescribed herbivory during the burrowing owl overwintering season (September 1–January 31) will be implemented within habitats determined to be suitable for overwintering burrowing owls by a qualified RPF or biologist, if feasible. If conducting treatments outside of the burrowing owl overwintering season is determined to be infeasible, then SPR BIO-10 will be implemented. 			

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<ul style="list-style-type: none"> ▶ To verify that habitat for marbled murrelet would be physically avoided by treatment activities, a qualified RPF or biologist will assess the treatment area, and adjacent habitat within 0.25 mile if access allows, for trees that contain nesting platforms suitable for marbled murrelet and the associated forest structure that would indicate suitable nesting sites. Habitat assessment will follow the guidelines described in Methods for Surveying Marbled Murrelets in Forests; A revised Protocol for Land Management and Research (Mack et al. 2003) in contact with the USFWS and CDFW using the CDFW pre-consultation information guidelines. ▶ If habitat suitable for nesting by the species is present, the following measures will be implemented: <ul style="list-style-type: none"> ▪ Prescribed burning, mechanical treatments, or manual treatments using power tools will be conducted outside of the nesting season (March 24 to September 15) (USFWS 2020) within 0.25 miles of potentially suitable habitat for the species (i.e., redwood/Douglas fir forest). ▪ If it is not feasible to conduct prescribed burning, mechanical treatments, or manual treatments using power tools outside of the nesting season, and habitat suitable for marbled murrelet (i.e., nesting trees) are present within the treatment area or within 0.25 mile (as identified in the previous bullet), then SPR BIO-10 will be implemented. ▶ To avoid impacts on special-status nesting birds (i.e., American peregrine falcon, bald eagle, black crowned night heron, black swift, Cooper’s hawk, golden eagle northern harrier, loggerhead shrike, long-eared owl, olive-sided flycatcher, osprey, purple martin, saltmarsh common yellowthroat, sharp-shinned hawk, short-eared owl, tricolored blackbird, Vaux’s swift, white-tailed kite, yellow-breasted chat, and yellow warbler), a limited operating period for all treatment activities within the nesting season from December 1–July 31 for golden eagle and bald eagle, January 1–August 31 for white-tailed kite, and February 1–August 31 for other special-status nesting birds will be implemented within habitats determined to be suitable for these species by a qualified RPF or biologist, if feasible. If conducting treatments outside of the nesting bird season is determined to be infeasible, then SPR BIO-10 will be implemented. ▶ To avoid impacts on Northern California ringtail, a limited operating period for prescribed burning and mechanical or manual tree or snag (i.e., greater than 12 inches DBH) removal activities during the maternity season from April 15 to July 31 will be implemented, if feasible. If conducting mechanical and manual tree or snag removal or prescribed burning treatments outside of the ringtail maternity season is determined to be infeasible for certain treatments, then SPR BIO-10 will be implemented. ▶ If proposed project activities will occur within suitable habitat for San Francisco dusky-footed woodrat as determined by a qualified RPF or biologist, then the following will apply. <ul style="list-style-type: none"> ▪ If only prescribed herbivory, or herbicide application is proposed, then no further avoidance measures are required. ▪ If prescribed burning, mechanical treatments, or manual treatments are proposed, then SPR BIO-10 will be implemented. ▶ To avoid impacts on special-status bat maternity colonies, a limited operating period for prescribed burning, mechanical treatments, and manual treatments and herbicide application using power equipment from April 1 			

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>to August 31 during the sensitive season will be implemented, if feasible. If the limited operating period is infeasible, focused surveys will be required per SPR BIO-10.</p> <p>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).</p> <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p>Project-Specific Guidance to Implement SPR BIO-1</p> <p><u>Special-Status Wildlife</u></p> <p>Because there is no reliable season during which all impacts on Crotch's bumble bee, California red-legged frog, foothill yellow-legged frog, California giant salamander, coast horned lizard, northwestern pond turtle, Santa Cruz black salamander, American badger, and mountain lion could be avoided and avoidance of habitat is not feasible due to these species' variable habitat preferences, or the need to implement treatments within habitat, implementation of SPR BIO-10 for these species would be required before all treatment activities.</p>			
<p>SPR BIO-2: Require Biological Resource Training for Workers</p> <p>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.</p>	Prior to treatment activities.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>Project-Specific Guidance to Implement SPR BIO-2 <u>San Francisco Dusky-Footed Woodrat</u></p> <p>The qualified RPF or biologist will provide all workers conducting prescribed burning, mechanical treatments, and manual treatments with specific training on finding the various typical and atypical woodrat nests, and how to estimate a 10-foot buffer around the nest. Training will include in field practical training using existing woodrat nests within planned treatment areas or similar habitat types, or equivalent training methodologies.</p>			
<p>Sensitive Natural Communities and Other Sensitive Habitats</p>			
<p>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:</p> <ul style="list-style-type: none"> ▶ 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 <i>A Manual of California Vegetation</i> (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. <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p>Project-Specific Guidance to Implement SPR BIO-3 If fine-scale mapping to the alliance level using the state’s Vegetation Classification and Mapping Program (VegCAMP) methodology has been completed for the treatment area, the qualified RPF or biologist can rely on that existing fine-scale mapping, with field verification, to identify sensitive natural communities or sensitive habitats.</p>	<p>Prior to all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>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:</p> <ul style="list-style-type: none"> ▶ 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 	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

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<p>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.</p> <ul style="list-style-type: none"> ▶ 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 <i>Accelerated Wood Recruitment and Timber Operations: Process Guidance from the California Timber Harvest Review Team Agencies and National Marine Fisheries Service</i>). ▶ 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 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 			

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<p>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.</p> <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>			
<p>SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub</p> <p>The project proponent will design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present. An ecological definition of type conversion is used in the CalVTP Program EIR 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 Program EIR, 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).</p> <p>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.</p> <p>For all treatment types in chaparral and coastal sage scrub, the project proponent, in consultation with a qualified RPF or qualified biologist will:</p> <ul style="list-style-type: none"> ▶ 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. <p>These SPR requirements apply to all treatment activities and all treatment types, including treatment maintenance.</p>	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

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<p>Additional measures will be applied to ecological restoration treatment types:</p> <ul style="list-style-type: none"> ▶ For ecological restoration treatment types, complete removal of the mature shrub layer will not occur in native chaparral and coastal sage scrub vegetation types. ▶ Ecological restoration treatments will not be implemented in vegetation types that are within their natural fire return interval (i.e., time since last burn is less than the average time listed as the fire return interval range in Table 3.6-1) unless the project proponent demonstrates with substantial evidence that the habitat function of chaparral and coastal sage scrub would be improved. ▶ A minimum of 35 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density (i.e., if baseline shrub canopy density is 60 percent, post treatment shrub canopy density will be no less than 40 percent). A different percent relative cover can be retained if the project proponent demonstrates with substantial evidence that alternative treatment design measures would result in effects on the habitat function of chaparral and coastal sage scrub that are equal or more favorable than those expected to result from application of the above measures. Biological considerations that may inform a deviation from the minimum 35 percent relative cover retention include but are not limited to soil moisture requirements, increased soil temperatures, changes in light/shading, presence of sufficient seed plants and nurse plants, erosion potential, and site hydrology. ▶ If the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity. <p>These SPR requirements apply to all treatment activities and only the ecosystem restoration treatment type, including treatment maintenance.</p> <p>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 Program EIR, such as geographic context. It is beyond the legal scope of the Program EIR to define SB 1260 type conversion and statutory compliance. The project proponent, acting as lead agency for the proposed later treatment project, will be responsible for defining type conversion in the context of the project and making the finding that type conversion would not occur, as required by SB 1260. The project proponent will determine its criteria for defining and avoiding type conversion and, in making its findings, may draw upon information presented in this Program EIR.</p>			
<p>SPR BIO-6: Prevent Spread of Plant Pathogens</p> <p>When working in sensitive natural communities, riparian habitats, or oak woodlands that are at risk from plant pathogens (e.g., lone chaparral, blue oak woodland), the project proponent will implement the following best management practices to prevent the spread of <i>Phytophthora</i> and other plant pathogens (e.g., pitch canker (<i>Fusarium</i>), goldspotted oak borer, shot hole borer, bark beetle):</p> <ul style="list-style-type: none"> ▶ 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; 	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

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<ul style="list-style-type: none"> ▶ include training on <i>Phytophthora</i> 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 (<i>Working Group for Phytoptheras in Native Habitats 2016</i>). <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>			
<p>SPR BIO-7: Survey for Special-Status Plants</p> <p>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."</p> <p>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.</p> <p>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.</p> <p>For other special-status plants not listed under CESA or ESA, as defined in Section 3.6.1 of this Program EIR, surveys will not be required under the following circumstances:</p> <ul style="list-style-type: none"> ▶ 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. <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>	<p>Prior to all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

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<p>Project-Specific Guidance to Implement SPR BIO-7</p> <ul style="list-style-type: none"> ▶ If the limited operating period (i.e., non-ground-disturbing treatment activities conducted during the dormant season) for non-ESA and -CESA herbaceous annual species, stump-sprouting species, or geophyte species is determined to be infeasible, then protocol-level surveys for these species will be conducted prior to implementation of treatments. ▶ Protocol-level surveys will be conducted for all special-status plants listed under ESA or CESA and non-stump sprouting perennial species not listed under ESA or CESA prior to implementation of treatments. ▶ Plants that are only listed as special-status by the Local Coastal Program, which consist of Gairdner's yampah (<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>) and straggles bush (<i>Ribes divaricatum</i> var. <i>pubiflorum</i>), only need to be included in protocol-level surveys pursuant to SPR BIO-7 for treatment areas in the Coastal Zone. <p>The results of protocol-level surveys for special-status plant species will be submitted to Coastal Commission staff before activities occur in a treatment area.</p>			
Environmentally Sensitive Habitat Areas			
<p>SPR BIO-8: Identify and Avoid or Minimize Impacts in Coastal Zone ESHAs</p> <p>When planning a treatment project within the Coastal Zone, the project proponent will, in consultation with the Coastal Commission or a local government with a certified Local Coastal Program (LCP) (as applicable), identify the habitat types and species present to determine if the area qualifies as an Environmentally Sensitive Habitat Area (ESHA). If the area is an ESHA, the treatment project may be allowed pursuant to this Program EIR, if it meets the following conditions. If a project requires a CDP by the Coastal Commission or a local government with a certified LCP (as applicable), the CDP approval may require modification to these conditions to further avoid and minimize impacts:</p> <ul style="list-style-type: none"> ▶ The treatment will be designed, in compliance with the Coastal Act or LCP if a site is within a certified LCP area, to protect the habitat function of the affected ESHA, protect habitat values, and prevent loss or type conversion of habitat and vegetation types that define the ESHA, or loss of special-status species that inhabit the ESHA. ▶ Treatment actions will be limited to eradication or control of invasive plants, removal of uncharacteristic fuel loads (e.g., removing dead, diseased, or dying vegetation), trimming/limbing of woody species as necessary to reduce ladder fuels, and select thinning of vegetation to restore densities that are characteristic of healthy stands of the vegetation types present in the ESHA. ▶ A qualified biologist or RPF familiar with the ecology of the treatment area will monitor all treatment activities in ESHAs. ▶ Appropriate no-disturbance buffers will be developed in compliance with the Coastal Act or relevant LCP policies for treatment activities in the vicinity of ESHAs to avoid adverse direct and indirect effects to ESHAs. <p>This SPR applies to all treatment activities and all treatment types, including treatment maintenance.</p>	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz

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<p>Project-Specific Guidance to Implement SPR BIO-8</p> <p>All treatments will be implemented consistent with the approved Coastal VTS from the Resource Conservation District of Santa Cruz County’s certified Forest Health and Fire Resilience Public Works Plan.</p>			
<p>Invasive Plants and Wildlife</p>			
<p>SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife</p> <p>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):</p> <ul style="list-style-type: none"> ▶ clean clothing, footwear, and equipment used during treatments of soil, seeds, vegetative matter, other debris or seed-bearing material, or water (e.g., rivers, streams, creeks, lakes) before entering the treatment area or when leaving an area with infestations of invasive plants, noxious weeds, or invasive wildlife; ▶ for all heavy equipment and vehicles traveling off road, pressure wash, if feasible, or otherwise appropriately decontaminate equipment at a designated weed-cleaning station prior to entering the treatment area from an area with infestations of invasive plants, noxious weeds, or invasive wildlife. Anti-fungal wash agents will be specified if the equipment has been exposed to any pathogen that could affect native species; ▶ inspect all heavy equipment, vehicles, tools, or other treatment-related materials for sand, mud, or other signs that weed seeds or propagules could be present prior to use in the treatment area. If the equipment is not clean, the qualified RPF or biological technician will deny entry to the work areas; ▶ stage equipment in areas free of invasive plant infestations unless there are no uninfested areas present within a reasonable proximity to the treatment area; ▶ identify significant infestations of invasive plant species (i.e., those rated as invasive by Cal-IPC or designated as noxious weeds by California Department of Food and Agriculture) during reconnaissance-level surveys and target them for removal during treatment activities. Treatment methods will be selected based on the invasive species present and may include herbicide application, manual or mechanical treatments, prescribed burning, and/or herbivory, and will be designed to maximize success in killing or removing the invasive plants and preventing reestablishment based on the life history characteristics of the invasive plant species present. Treatments will be focused on removing invasive plant species that cause ecological harm to native vegetation types, especially those that can alter fire cycles; ▶ 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). <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
Wildlife			
<p>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.</p> <p>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.</p> <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p>Project-Specific Guidance to Implement SPR BIO-10</p> <ul style="list-style-type: none"> ▶ Because avoidance of habitat pursuant to SPR BIO-1 is not feasible to avoid impacts on Crotch’s bumble bee, a habitat assessment will be conducted by a qualified biologist or RPF. If habitat suitable for the species is present, focused surveys will be conducted by a biologist or qualified RPF within habitat potentially suitable for Crotch’s bumble bee based on the <i>Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species</i> (CDFW 2023) or more recent guidance, prior to implementation of all treatment activities, or presence of this species in potentially suitable habitat will be assumed, and Mitigation Measure BIO-2g will be implemented. ▶ If it is not feasible to avoid prescribed burning, mechanical, manual, herbicide, and prescribed herbivory treatments within documented or potential monarch overwintering habitat pursuant to SPR BIO-1, to avoid impacts to overwintering monarch butterflies, the following will be implemented: <ul style="list-style-type: none"> ▪ A qualified RPF or biologist will assess the treatment area for previously documented overwintering stands and other stands suitable for overwintering monarch butterflies and overwintering activity. ▪ If documented overwintering stands or other stands suitable for overwintering by monarch are present within the treatment area, these stands will be recorded and surveyed for overwintering monarchs and, Mitigation Measure BIO-2b will be implemented. ▶ If it is not feasible to avoid mechanical, manual, herbicide, or prescribed burning treatments in grasslands, shrub, and oak woodland habitat during the period when monarch may be breeding (March 15-October 31) pursuant to SPR BIO-1, focused surveys for milkweed host plants (<i>Asclepias</i> spp.) will be conducted prior to implementing treatment activities. If milkweed is detected during focused surveys, further survey for monarch butterfly eggs, larvae, and pupae may be conducted or presence of monarch may be assumed. If milkweed host plants are detected during focused surveys and monarch butterfly is detected or assumed present, Mitigation Measure BIO-2e will be implemented. 	<p>Prior to all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<ul style="list-style-type: none"> ▶ Prior to implementation of prescribed burning, mechanical, manual, and herbicide application activities, a qualified RPF or qualified biologist will conduct protocol-level surveys for California red-legged frog pursuant to the <i>Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog</i> (USFWS 2005) within habitat potentially suitable for the species, or presence of the species will be assumed and Mitigation Measure BIO-2a will be implemented. If protocol-level surveys are conducted and California red-legged frogs are not detected within the treatment areas, then no additional mitigation for the species will be required and Mitigation Measure BIO-2a will not be required. If California red-legged frog is detected or assumed present, Mitigation Measure BIO-2a will be implemented. ▶ To avoid impacts on foothill yellow-legged frogs, focused surveys (i.e., visual encounter, or walk and turn surveys) would be conducted within habitat suitable for the species prior to implementation of treatment activities (i.e., prescribed burning, mechanical treatments, manual tree and snag removal, and herbicide application) that occur within 200 feet of Class I and Class II watercourses that provide habitat suitable for foothill yellow-legged frog as determined by a qualified RPF or biologist, focused visual encounter surveys for foothill yellow-legged frog will be conducted prior to treatment activities within the 200-foot buffer. If foothill yellow-legged frogs are not detected within the treatment area during focused surveys, then no mitigation for the species would be required. If foothill yellow-legged frogs are identified during focused surveys, Mitigation Measure BIO-2a would be implemented. ▶ To avoid impacts on northwestern pond turtles focused surveys for individuals and nests will be conducted by a qualified biologist or RPF prior to prescribed burning, mechanical treatments, and manual tree removal treatment activities that occur in upland habitat suitable for northwestern pond turtle as determined by a qualified biologist or RPF. Upland habitat may include riparian areas, grasslands, and open oak woodlands on east-facing (Reese and Welsh 1997) or south-facing areas that are less than 25 percent slope (Buskirk 2002) within 1,300 feet of aquatic habitat (USFWS 2023). If southwestern pond turtles or nests are detected during focused surveys, Mitigation Measure BIO-2b will be implemented. ▶ To avoid impacts on other special-status reptiles and amphibians (i.e., California giant salamander, coast horned lizard, Santa Cruz black salamander), focused surveys (i.e., visual encounter, or walk and turn surveys) would be conducted within habitat suitable for the species prior to implementation of treatment activities (i.e., prescribed burning, mechanical treatments, manual tree and snag removal, and herbicide application). If California giant salamander, coast horned lizard, Santa Cruz black salamander are identified during focused surveys, or if presence of these species is assumed, Mitigation Measure BIO-2b will be implemented. ▶ If it is not feasible to avoid prescribed burning, mechanical treatments, manual treatments, and prescribed herbivory during the burrowing owl overwintering season (September 1–January 31) in habitats suitable for the species, pursuant to SPR BIO-1, then a survey shall be conducted to determine whether burrowing owls occupy the portions of the treatment area subject to mechanical or manual treatments, or ground or human disturbance associated with prescribed burning (e.g., control lines, staging areas) or prescribed herbivory (e.g., fence lines, pens, watering infrastructure, staging areas). 			

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<ul style="list-style-type: none"> ▪ Surveys shall be conducted according to Appendix D of the 2012 <i>Staff Report on Burrowing Owl Mitigation</i> prepared by California Department of Fish and Game (now California Department of Fish and Wildlife; CDFW 2012) or any subsequent updated guidance. Surveys shall be conducted within 250 feet of mechanical or manual treatments, or ground or human disturbance associated with prescribed burning (e.g., control lines, staging areas) and prescribed herbivory (e.g., fence lines, watering infrastructure, staging areas). Because burrowing owls may recolonize a site after only a few days the single survey, or an additional survey, shall be conducted no less than 14 days before initiating treatment activities to verify that take of burrowing owl would not occur. Alternatively, following the first survey, any burrows that are potentially suitable for burrowing owl would be assumed to be occupied. If active overwintering burrowing owl burrows are detected during protocol surveys, or burrows are assumed to be occupied, Mitigation Measure BIO-2a will be implemented. ▶ If it is not feasible to avoid prescribed burning, mechanical treatments, or manual treatments using power tools within nesting habitat during the marbled murrelet nesting season (March 24 to September 15), and potential nesting trees are observed during habitat assessment pursuant to SPR BIO-1, the following will be implemented to avoid impacts to marbled murrelet from treatment activities conducted during the nesting season: <ul style="list-style-type: none"> ▪ If nesting trees suitable for marbled murrelet are observed within the project area or adjacent habitat, pursuant to the habitat assessment in SPR BIO-1, then surveys for marbled murrelets will be conducted as described in Mack et al. (2003) in contact with CDFW and USFWS, or presence of nests may be assumed. Other survey protocols using Acoustic Recording Units or comparable methods may be substituted if it is determined in contact with CDFW and USFWS, that an alternate protocol is sufficient to determine occupancy of potential nesting locations. ▪ If marbled murrelets are detected during focused surveys, or the presence of nests is assumed, Mitigation Measure BIO-2a will be implemented. ▶ If it is not feasible to avoid all treatments during the nesting bird season (i.e., December 1–July 31 for golden eagle and bald eagle, January 1–August 31 for white-tailed kite, and February 1–August 31 for other special-status nesting birds (as adjusted by a qualified RPF or biologist), pursuant to SPR BIO-1, focused surveys (i.e., nest searches) for nests of special-status species (i.e., American peregrine falcon, bald eagle, black crowned night heron, black swift, Cooper’s hawk, golden eagle northern harrier, loggerhead shrike, long-eared owl, olive-sided flycatcher, osprey, purple martin, saltmarsh common yellowthroat, sharp-shinned hawk, short-eared owl, tricolored blackbird, Vaux’s swift, white-tailed kite, yellow-breasted chat, and yellow warbler) will be conducted in habitat suitable for the species prior to implementing treatment activities during the nesting bird season. If nesting special-status birds are detected during focused surveys, Mitigation Measure BIO-2a or BIO-2b will be implemented depending on the species detected. ▶ To avoid impacts on American badger, focused den surveys in habitat determined to be suitable for denning by a qualified biologist or RPF will be conducted prior to implementing pile burning, installation of control lines and staging areas for prescribed burning, mechanical treatments, or the setup of infrastructure for 			

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>prescribed herbivory activities year-round. Within the pupping season (February 15–July 1) surveys will be conducted prior to, manual treatments, as well as the other activities which require year-round survey. If American badger dens are detected during focused surveys, Mitigation Measure BIO-2b will be implemented.</p> <ul style="list-style-type: none"> ▶ To avoid impacts on mountain lion, prior to implementing prescribed burning, manual tree and snag removal treatments, and mechanical treatments, nursery habitat suitable for the species will be identified by a qualified RPF or biologist through desktop analyses (e.g., review of land cover, slope, distance from development, coordination with local experts studying or tracking the species [if available], and field assessments). Potential mountain lion nursery habitat may include large natural cavities within rocky areas, downed trees, shrub thickets, or other areas with structures deemed appropriate for use by mountain lions based on size and other characteristics (e.g., proximity to human development, surrounding habitat). If nursery habitat is confirmed within the treatment area, use of the habitat will be assumed and Mitigation Measure BIO-2a will be applied. If nursery habitat is not identified within the treatment area, no additional measures will be required. ▶ If it is not feasible to avoid prescribed burning or mechanical and manual large tree and snag (i.e., greater than 12 inches DBH) removal within habitat suitable for Northern California ringtail during the ringtail maternity season (pursuant to SPR BIO-1), focused surveys for ringtail will be conducted using trail cameras, track plates, or other non-invasive survey methods to determine whether ringtails are present within the treatment area. Surveys will be conducted by a qualified RPF or biologist with the appropriate permits as needed, or presence may be assumed. If ringtails are detected during focused surveys, or presence is assumed, Mitigation Measure BIO-2a will be implemented. ▶ To avoid impacts on San Francisco dusky-footed woodrat, focused surveys for the species will be conducted by a qualified RPF, biologist, or biological technician within habitat suitable for the species year-round prior to implementation of traditional mechanical treatments; nest presence may be assumed for other treatment types including mechanical treatments using remote-controlled masticators. If San Francisco dusky-footed woodrat nests are detected during focused surveys or assumed to be present, Mitigation Measure BIO-2b will be implemented. ▶ If it is not feasible to avoid prescribed burning, mechanical treatments, manual treatments, and herbicide application using power equipment within habitat suitable for special-status bat roosting during the bat maternity season (April 1 through August 31) pursuant to SPR BIO-1, focused surveys for maternity roosts will be conducted by a qualified RPF or biologist prior to implementing these treatment activities during the bat maternity season. If special-status maternity roosts are detected during focused surveys, Mitigation Measure BIO-2b will be implemented. 			
<p>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:</p> <ul style="list-style-type: none"> ▶ 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. 	<p>Prior to and during all prescribed herbivory treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<ul style="list-style-type: none"> ▶ 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. <p>This SPR applies only to prescribed herbivory and all treatment types, including treatment maintenance.</p>			
<p>SPR BIO-12: Protect Common Nesting Birds, Including Raptors</p> <p>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 Program EIR. The active nesting season will be defined by the qualified RPF or biologist.</p> <p>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., CNDDDB, eBird database, State Wildlife Action Plan) should be reviewed in advance of the survey to identify the common nesting birds, including raptors, that are known to occur in the vicinity of the treatment site. The survey area will encompass reasonably accessible areas of the treatment site and the immediately surrounding vicinity viewable from the treatment site. The survey area will be determined by a qualified RPF or biologist, based on the potential species in the area, location of suitable nesting habitat, and type of treatment. For vegetation removal or project activities that would occur during the nesting season, the survey will be conducted at a time that balances 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).</p> <p>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:</p> <ul style="list-style-type: none"> ▶ 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 	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>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.</p> <ul style="list-style-type: none"> ▶ 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. <p>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).</p> <p>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:</p> <ul style="list-style-type: none"> ▶ 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. <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>			

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
Geology, Soils, Paleontology, and Mineral Resource Standard Project Requirements			
<p>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.</p> <p>Revisions to the SPR: Text of the original SPR will be removed and replaced with new language. The original language states, “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.” The revised language states, “The project proponent will suspend mechanical and prescribed herbivory treatment if (1) it is raining, (2) soils are saturated, and/or (3) soils are wet enough to be compacted by mechanical treatment or prescribed herbivory activities. The project proponent will suspend herbicide treatments if the National Weather Service forecast is a “chance” (30 percent or more) of rain within the next operational day’s 12-hour period between 6:00 a.m. and 6:00 p.m.”</p>	During mechanical, prescribed herbivory, and herbicide treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	During mechanical treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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</p>	During mechanical, prescribed herbivory, and prescribed burning treatment activities that result in exposure of bare soil over 50	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>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 burn treatment activities that result in exposure of bare soil over 50 percent of the project area and all treatment types, including treatment maintenance.</p>	<p>percent or more of the treatment area.</p>		
<p>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.</p>	<p>Prior to and during mechanical, prescribed herbivory, and prescribed burning treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>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 water breaks cannot effectively disperse surface runoff, including where water breaks 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.</p>	<p>During mechanical, manual, and prescribed burning treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>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.</p>	<p>During mechanical, manual, and prescribed burning treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>SPR GEO-7: Minimize Erosion To minimize erosion, the project proponent will:</p> <ol style="list-style-type: none"> (1) Prohibit use of heavy equipment where any of the following conditions are present: <ol style="list-style-type: none"> (i) Slopes steeper than 65 percent. (ii) Slopes steeper than 50 percent where the erosion hazard rating is high or extreme. 	<p>During all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>(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.</p> <p>(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:</p> <p>(i) Existing tractor roads that do not require reconstruction, or</p> <p>(ii) New tractor roads flagged by the project proponent prior to the treatment activity.</p> <p>(3) Prescribed herbivory treatments will not be used in areas with over 50 percent slope.</p> <p>This SPR applies to all treatment activities and all treatment types, including treatment maintenance.</p>			
<p>SPR GEO-8: Steep Slopes</p> <p>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 identify 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.</p>	Prior to and during mechanical treatment activities on slopes greater than 50 percent.	UC Santa Cruz	UC Santa Cruz
Hazardous Material and Public Health and Safety Standard Project Requirements			
<p>SPR HAZ-1: Maintain All Equipment</p> <p>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.</p> <p>Revisions to the SPR:</p> <p>Text of the original SPR will be removed and replaced with new language.</p> <p>The original language states, "Any equipment found leaking will be promptly removed."</p> <p>The revised language states, "Any equipment found leaking will be promptly stabilized and fixed on-site outside of Watercourse and Lake Protection Zones (WLPZ), or promptly removed and repaired off-site."</p>	Prior to and during treatment activities.	UC Santa Cruz and/or contractors	UC Santa Cruz
<p>SPR HAZ-2: Require Spark Arrestors</p> <p>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.</p>	During manual treatment activities.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>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.</p>	<p>During manual treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>SPR HAZ-4 Prohibit Smoking in Vegetated Areas The project proponent will require that smoking is only permitted in designated smoking areas barren or cleared to mineral soil at least 3 feet in diameter (PRC Section 4423.4). This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p>Project-Specific Guidance to Implement SPR HAZ-4 Per UC policy, no smoking or any tobacco products are allowed on campus. No smoking will be permitted at any time during project implementation.</p>	<p>During all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>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):</p> <ul style="list-style-type: none"> ▶ 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. <p>This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.</p>	<p>Prior to and during herbicide treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>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:</p> <ul style="list-style-type: none"> ▶ 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. <p>This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.</p>	<p>Prior to and during herbicide treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>Project-Specific Guidance to Implement SPR HAZ-6</p> <p>All targeted herbicide use on campus will be requested through the University Office of the President (UCOP) systemwide Pesticide Use Authorization (PUA) and approved campus Integrated Pest Management (IPM) Coordinator per the UCOP IPM policy. All targeted herbicide applications would be performed in accordance with UCOP IPM policy, as well as applicable local, state, and federal regulations.</p>			
<p>SPR HAZ-7: Triple Rinse Herbicide Containers</p> <p>The project proponent will triple rinse all herbicide and adjuvant containers with clean water at an approved site, and dispose of rinsate by placing it in the batch tank for application per 3 CCR Section 6684. The project proponent will puncture used containers on the top and bottom to render them unusable, unless said containers are part of a manufacturer’s container recycling program, in which case the manufacturer’s instructions will be followed. Disposal of non-recyclable containers will be at legal dumpsites. Equipment will not be cleaned, and personnel will not be washed in a manner that would allow contaminated water to directly enter any body of water within the treatment area or adjacent watersheds. Disposal of all herbicides will follow label requirements and waste disposal regulations.</p> <p>This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.</p>	During herbicide treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>SPR HAZ-8: Minimize Herbicide Drift to Public Areas</p> <p>The project proponent will employ the following herbicide application parameters during herbicide application to minimize drift into public areas:</p> <ul style="list-style-type: none"> ▶ 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. <p>This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.</p>	During herbicide treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>SPR HAZ-9: Notification of Herbicide Use in the Vicinity of Public Areas</p> <p>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.</p>	Post signs prior to the start of herbicide treatment activities and maintain the signs in place for at least 72 hours after treatment ceases.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/Monitoring Entity
Hydrology and Water Quality Standard Project Requirements			
<p>SPR HYD-1: Comply with Water Quality Regulations Project proponents must also conduct proposed vegetation treatments in conformance with appropriate RWQCB timber, vegetation and land disturbance related Waste Discharge Requirements (WDRs) and/or related Conditional Waivers of Waste Discharge Requirements (Waivers), and appropriate Basin Plan Prohibitions. Where these regulatory requirements differ, the most restrictive will apply. If applicable, this includes compliance with the conditions of general waste discharge requirements (WDR) and waste discharge requirement waivers for timber or silviculture activities where these waivers are designed to apply to non-commercial fuel reduction and forest health projects. In general, WDR and Waivers of waste discharge requirements for fuel reduction and forest health activities require that wastes, including but not limited to petroleum products, soil, silt, sand, clay, rock, felled trees, slash, sawdust, bark, ash, and pesticides must not be discharged to surface waters or placed where it may be carried into surface waters; and that Water Board staff must be allowed reasonable access to the property in order to determine compliance with the waiver conditions. The specifications for each WDR and Waiver vary by region. Regions 2 (San Francisco Bay), 4 (Los Angeles), 8 (Santa Ana), and 7 (Colorado River) are highly urban or minimally forested and do not offer WDRs or Waivers for fuel reduction or vegetation management activities. The current applicable WDRs and Waivers for timber and vegetation management activities are included in Appendix HYD-1. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p>Project-Specific Guidance to Implement SPR HYD-1 Vegetation treatment activities may result in discharges to Waters of the State; therefore, compliance with Water Code sections 13260(a)(1) and 13264 are required. The project proponent will use the State Water Board's Vegetation Treatment General Order, which provides a mechanism for Water Code compliance for projects that prepare a CalVTP PSA or PSA/Addendum. The project will be automatically enrolled (through implementation of SPR AD-7) in the State Water Board's Vegetation Treatment General Order. The project's automatic enrollment satisfies the requirements of SPR HYD-1.</p>	<p>During all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>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.</p>	<p>Prior to treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>SPR HYD-3: Water Quality Protections for Prescribed Herbivory The project proponent will include the following water quality protections for all prescribed herbivory treatments:</p> <ul style="list-style-type: none"> ▶ 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. 	<p>Prior to prescribed herbivory treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>► Treatment prescriptions will be designed to protect soil stability. Grazing animals will be herded out of an area if accelerated soil erosion is observed.</p> <p>This SPR applies to prescribed herbivory treatment activities and all treatment types, including treatment maintenance.</p>			
<p>SPR HYD-4: Identify and Protect Watercourse and Lake Protection Zones</p> <p>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.</p>	<p>Establish WLPZs during design of treatment project; implement WLPZ protections during treatment for all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

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

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

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

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>The following WLPZ protections will be applied for all treatments:</p> <ul style="list-style-type: none"> ▶ Treatment activities within WLPZs will retain at least 75 percent surface cover and undisturbed area to act as a filter strip for raindrop energy dissipation and for wildlife habitat. If this percentage is reduced a qualified RPF will provide the project proponent with a site- and/or treatment activity-specific explanation for the percent surface cover reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced percent as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). This requirement is based on 14 CCR Section 916.4 [936.4, 956.4] Subsection (b)(6) (February 2019 version) and 14 CCR Section 916.5 (February 2019 version). ▶ Equipment, including tractors and vehicles, must not be driven in wet areas or WLPZs, except over existing roads or watercourse crossings where vehicle tires or tracks remain dry. ▶ Equipment used in vegetation removal operations will not be serviced in WLPZs, within wet meadows or other wet areas, or in locations that would allow grease, oil, or fuel to pass into lakes, watercourses, or wet areas. ▶ WLPZs will be kept free of slash, debris, and other material that harm the beneficial uses of water. Accidental deposits will be removed immediately. ▶ Burn piles will be located outside of WLPZs. ▶ No fire ignition (nor use of associated accelerants) will occur within WLPZs. However, low intensity backing fires may be allowed to enter or spread into WLPZs. ▶ Within Class I and Class II WLPZs, locations where project operations expose a continuous area of mineral soil 800 square feet or larger shall be treated for 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. <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>			

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>Revisions to the SPR:</p> <p>Text of the original SPR will be removed and replaced with new language.</p> <p>The original language states, “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).”</p> <p>The revised language states, “The project proponent will establish Watercourse and Lake Protection Zones (WLPZs) on either side of watercourses within 300 feet of proposed manual, mechanical, prescribed burning, targeted herbicide application, and prescribed herbivory treatment activities as well as staging areas, as defined in the table below, which is based on 14 CCR Section 916 .5 of the California Forest Practice Rules (February 2019 version).”</p>			
<p>SPR HYD-5: Protect Non-Target Vegetation and Special-status Species from Herbicides</p> <p>The project proponent will implement the following measures when applying herbicides:</p> <ul style="list-style-type: none"> ▶ 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. <p>This SPR applies to herbicide treatment activities and all treatment types, including treatment maintenance.</p>	<p>During herbicide treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>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.</p>	Prior to any ground disturbing activities; after any ground disturbing activities if required.	UC Santa Cruz	UC Santa Cruz
Noise Standard Project Requirements			
<p>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.</p>	During all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	During all mechanical treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>SPR NOI-4: Locate Staging Areas Away from Noise-Sensitive Land Uses The project proponent will locate treatment activities, equipment, and equipment staging areas away from nearby noise-sensitive land uses (e.g., residential land uses, schools, hospitals, places of worship), to the extent feasible, to minimize noise exposure. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>	During all treatment activities.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>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.</p>	During all treatment activities.	UC Santa Cruz	UC Santa Cruz
<p>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.</p>	Prior to mechanical treatment activities occurring within 1,500 feet of noise-sensitive receptors.	UC Santa Cruz	UC Santa Cruz
Recreation Standard Project Requirements			
<p>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.</p>	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz
Transportation Standard Project Requirements			
<p>SPR TRAN-1: Implement Traffic Control during Treatments Prior to initiating vegetation treatment activities, the project proponent will work with the agency(ies) with jurisdiction over affected roadways to determine if a Traffic Management Plan (TMP) is needed. A TMP will be needed if traffic generated by the project would result in obstructions, hazards, or delays exceeding applicable jurisdictional standards along access routes for individual vegetation treatments. If needed, a TMP will be prepared to provide measures to reduce potential traffic obstructions, hazards, and service level degradation along affected roadway facilities. The scope of the TMP will depend on the type, intensity, and duration of the specific treatment activities under the CalVTP. Measures included in the TMP could include (but are not be limited to) construction signage to provide motorists with notification and information when approaching or traveling along the affected roadway facilities, flaggers for lane closures to provide temporary traffic control along affected roadway facilities, treatment schedule restrictions to avoid seasons or time periods of peak vehicle traffic, haul-trip, delivery, and/or commute time restrictions that would be implemented to avoid peak traffic days and times along affected roadway facilities. If the TMP identifies impacts on transportation facilities outside of the jurisdiction of the project proponent, the TMP will be submitted to the agency with jurisdiction over the affected roadways prior to</p>	Prepare TMP prior to treatment and implement TMP during treatment activities.	UC Santa Cruz	UC Santa Cruz

Standard Project Requirements	Timing	Implementing Entity	Verifying/ Monitoring Entity
<p>commencement of vegetation treatment projects. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p>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.</p>			
Public Services and Utilities Standard Project Requirements			
<p>SPR UTIL-1: Solid Organic Waste Disposition Plan</p> <p>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.</p>	<p>Prior to and during mechanical and manual treatment activities that require the disposal of material outside the treatment area.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
Air Quality			
<p>Mitigation Measure AQ-1: Implement On-Road Vehicle and Off-Road Equipment Exhaust Emission Reduction Techniques</p> <p>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 be 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.</p> <p>Techniques for reducing emissions may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▶ 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: <ul style="list-style-type: none"> ▪ 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. <p>Off-road equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NO_x and PM.</p>	<p>During all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
Archaeological, Historical, and Tribal Cultural Resources			
<p>Mitigation Measure CUL-2: Protect Inadvertent Discoveries of Unique Archaeological Resources or Subsurface Historical Resources</p> <p>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.</p>	<p>During all ground-disturbing activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
Biological Resources			
<p>Mitigation Measure BIO-1a: Avoid Loss of Special-Status Plants Listed under ESA or CESA</p> <p>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</p>	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>(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.</p> <p>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.</p> <p>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.</p>			
<p>Mitigation Measure BIO-1b: Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA</p> <p>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:</p> <ul style="list-style-type: none"> ▶ 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. 	Prior to and during all treatment activities.	UC Santa Cruz	UC Santa Cruz

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>► 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.</p> <p>► No fire ignition (and associated use of accelerants) will occur within the special-status plant buffer.</p> <p>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.</p> <p>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.</p> <p>Project-Specific Guidance to Implement Mitigation Measure BIO-1b</p> <p>An exception to the no treatment within avoidance buffers for perennial species is in place for Anderson's manzanita (<i>Arctostaphylos andersonii</i>) for broadcast burning treatment with the following stipulations: If Anderson's manzanita is detected in protocol-level surveys in a treatment area pursuant to SPR BIO-7 and no other special-status plant species are detected in the treatment area, broadcast burning could be implemented without establishing plant avoidance buffers. Where Anderson's manzanita is identified, broadcast burning treatment would only be implemented outside of the fire return interval for the vegetation type it is present within (i.e., time since last burn or treatment is greater than the average fire return interval for the vegetation type).</p>			
<p>Mitigation Measure BIO-1c: Compensate for Unavoidable Loss of Special-Status Plants</p> <p>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</p>	<p>Prior to, during, and after treatment</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> ▶ 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. <p>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:</p> <ul style="list-style-type: none"> ▶ 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. <p>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.</p>			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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.</p> <p>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.</p> <p>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 Program EIR.</p> <p>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.</p>			
<p>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)</p> <p>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.</p> <p><u>Avoid Mortality, Injury, or Disturbance of Individuals</u></p> <p>The project proponent will implement one of the following two measures to avoid mortality, injury, or disturbance of individuals:</p> <ol style="list-style-type: none"> 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. <p>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.</p>	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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.</p> <p><u>Maintain Habitat Function</u></p> <ul style="list-style-type: none"> ▶ The project proponent will design treatment activities to maintain the habitat function, by implementing the following: <ul style="list-style-type: none"> ▪ 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. <p>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 the lead agency determines after consultation that the treatment will not maintain habitat function for the special-status species, the project proponent will implement Mitigation Measure BIO-2c.</p> <p>Project-Specific Guidance to Implement Mitigation Measure BIO-2a</p> <p><u>California Red-Legged Frog</u></p> <p>If California red-legged frog is assumed present or detected during protocol-level surveys (pursuant to SPR BIO-10), the following measures will be implemented:</p> <ul style="list-style-type: none"> ▶ Pre-treatment surveys and biological monitoring. Pre-treatment visual surveys will be performed daily by a qualified RPF, biologist, or biological technician, prior to implementation of treatment activities (i.e., mechanical, manual, prescribed burning, and herbicide) within 300 feet of Class I or Class II streams and within or adjacent to other sensitive habitat areas (e.g., wet intermittent streams, wet seeps), during the dispersal season (October 1 through April 1) or within 24 hours following a rain event greater than one quarter inch. Visual surveys and visual monitoring of the treatment area during operations will be performed year- 			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>around prior to any activities within 30 feet of Class I or Class II streams and within or adjacent to other sensitive habitat areas (e.g., wet Class III streams, wet seeps). If a California red-legged frog is found during pre-activity surveys or enters the project site during treatment activities, all work will stop within a no-disturbance buffer of 100 feet around the individual unless the qualified RPF or biological technician determines that a different sized buffer is appropriate to avoid disturbance, injury, or mortality. Treatment activities will cease within the buffer until the animal leaves on its own and the occurrence will be reported to the qualified RPF or biological technician and USFWS.</p> <ul style="list-style-type: none"> ▶ If California red-legged frog is found during pre-activity surveys, which will be conducted by a qualified RPF, biologist, or biological technician, or enters the project site during treatment activities, the specific habitat features (i.e., log, tree, debris pile) used by the frog when detected will be evaluated by a qualified RPF, biologist, or biological technician for habitat retention, if habitat retention is achievable while meeting the project goals. ▶ Mechanical treatments will be prohibited within 30 feet of Class III watercourses; Mechanized treatments may occur from an existing road in WLPZ or ELZs if pretreatment surveys have been conducted within 24 hours that resulted in no California red-legged frog detection; and all mechanized equipment, including track chippers, and herbicide treatments will shut down for 24 hours following any precipitation event of 0.20 inch to less than 1 inch, 48 hours following any precipitation event 1 inch to less than 2 inches, and 72 hours following any precipitation event greater or equal to 2 inches. ▶ Burn piles located within 300 feet of Class I or Class II watercourses will be inspected prior to ignition to avoid impacts to California red-legged frog that may be using the pile as refuge. ▶ All herbicide use during project implementation will comply with the herbicide use restrictions in the stipulated injunction issued by the Federal District Court for the Northern District of California to resolve the 2006 case brought against the Environmental Protection Agency by the Center for Biological Diversity. For example, to comply with the injunction, only cut stump and basal bark applications will be allowed in California red-legged frog habitat under the following conditions. <ul style="list-style-type: none"> ▪ Cut stump and basal bark applications may be used but will not be applied within 60 feet of breeding or non-breeding aquatic habitat. ▶ If operators need to move or treat large woody debris greater than 12 inches in diameter, that piece of woody debris will be evaluated for the presence of California red-legged frog by a qualified biological technician, qualified professional, qualified RPF, RPF supervised designee, or a contractor who has been through environmental awareness training. ▶ All personnel involved in the implementation of the project will check for the presence of California red-legged frog under or next to stationary vehicles prior to operating their vehicles. If a California red-legged frog is found, the qualified RPF, biologist, or biological technician will contact the USFWS to determine necessary next steps to avoid impact. 			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p><u>Foothill Yellow-Legged Frog</u></p> <p>If foothill yellow-legged frog is detected during focused surveys (i.e., visual encounter, or walk and turn surveys) or assumed to be present (pursuant to SPR BIO-10), the following will be implemented:</p> <ul style="list-style-type: none"> ▶ Biological monitoring by a qualified RPF, biologist, or biological technician during treatment activities (i.e., prescribed burning, mechanical treatments, manual tree and snag removal, and herbicide application) within or adjacent to sensitive habitat areas (e.g., perennial streams, seeps, springs) will be implemented to avoid injury to or mortality of individual frogs. If the qualified RPF, qualified biologist, or qualified biological technician detects a foothill yellow-legged frog during treatments, treatment activities will cease until the individual has left the area or has been moved out of harm’s way and to other nearby habitat suitable for the species by the qualified RPF, qualified biologist, or biological technician. ▶ All personnel involved in the implementation of the project will check for the presence of foothill yellow-legged frog under or next to stationary vehicles prior to operating their vehicles. If a foothill yellow-legged frog is found, the qualified RPF or biological technician will contact CDFW and USFWS to determine the next steps to avoid impact. <p><u>Burrowing Owl</u></p> <p>If burrowing owls are detected during protocol surveys (pursuant to SPR BIO-10), the following will be implemented:</p> <ul style="list-style-type: none"> ▶ If an active burrowing owl burrow or a potentially active burrow that is assumed to be occupied is detected during the overwintering season (September 1–January 31), during SPR BIO-10 surveys, a no-disturbance nest buffer of 250 feet will be placed around the burrow. No mechanical or manual treatments, or ground or human disturbance associated with prescribed burning (e.g., control lines, staging areas) or prescribed herbivory (e.g., fence lines, watering infrastructure, staging areas) would occur within this buffer until all burrowing owls have left the burrow (i.e., surveys indicate that no owls have used the burrow for seven consecutive days) as determined by a qualified biologist or RPF. The buffer distance may be modified by a qualified RPF or biologist based on presence of natural buffers provided by vegetation or topography, baseline levels of noise and human activity, and expected treatment activities in coordination with CDFW. <p><u>Marbled Murrelet</u></p> <ul style="list-style-type: none"> ▶ If it is infeasible to avoid prescribed burning, mechanical treatments, or manual treatments using power tools during the marbled murrelet nesting season (March 24 to September 15) and nesting trees are present (pursuant to SPR BIO-1), and nests of the species have been detected during protocol surveys, or occupancy is assumed (pursuant to SPR BIO-10), a no-disturbance buffer will be implemented up to 330 feet of nests or suitable nesting trees depending on the noise generated by the activity following the recommendations in <i>General Sound Assessment and Action-Generated Noise Analysis within Huddart County Park, Pescadero Creek County Park, and Big Basin Redwoods State Park</i> (in SMCP 2022). For helicopter and drone operations, this buffer will be a vertical buffer as well as a horizontal buffer (e.g., 330 feet horizontal distance or 100 feet AGL). A reduced buffer size may be implemented by a qualified RPF or biologist in coordination with CDFW and USFWS. 			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>▶ If marbled murrelet nests are detected or assumed, the nest tree or assumed nest tree, and any adjacent trees that provide screening or canopy cover to the nest will be retained regardless of the diameter of the tree.</p> <p><u>Other Special-Status Birds</u></p> <p>▶ If active special-status bird nests are detected during focused surveys, a no-disturbance buffer for ground and aerial treatment activities of at least 1 mile will be established around active nests for golden eagle, 0.5 mile for bald eagle nests, 0.25 mile for white-tailed kite nests, and 250 feet for tricolored blackbird nests. No treatment activities will occur within these buffers until the chicks have fledged, or the nest is otherwise no longer active, as determined by a qualified RPF or biologist. Nest buffers may be adjusted by a qualified RPF or biologist, based on vegetative and topographic screening and other factors.</p> <p><u>Mountain Lion</u></p> <p>▶ Within 14 days prior to the start of prescribed burning, mechanical treatments, and manual tree and snag removal treatments, a qualified RPF or biologist will inspect suitable nursery habitat (as determined pursuant to SPR BIO-10) in the part of the treatment area scheduled to be treated during that 14-day period for mountain lion or signs of mountain lion nurseries. The qualified RPF or biologist will also use publicly available data on recent mountain lion sightings, or survey for signs of mountain lion (e.g., tracks, scat, prey items such as a fresh kill) in the vicinity of potential nursery habitat to help determine whether the area may contain an active mountain lion nursery. If no mountain lion or sign of a nursery is observed, treatment activities may begin. If signs of a mountain lion nursery are observed, further investigation will be required to determine if a mountain lion nursery is present (see below).</p> <p>▶ If signs of a mountain lion nursery are found during review of publicly available data or during surveys, further investigation will be required to determine if a mountain lion nursery is present. No treatment will occur in the area while further investigation is occurring. Survey methods will include the use of trail cameras, listening for calling kittens and/or other noninvasive methods, as well as coordination with local experts tracking the species (if available). Surveys using these noninvasive methods will be conducted for five days and five nights to determine whether a nursery may be present.</p> <p>▶ If a nursery is known to occur in the area or further signs of a nursery are detected based on the surveys described above (e.g., lactating adult females or cubs on camera, repeated detections of an adult female in the area, growls or calls from kittens), no-disturbance buffer of at least 2,000 feet (Wilmers et al. 2013) will be applied for 10 weeks. The duration of the buffer may be shortened by the qualified biologist or RPF based on evidence (e.g., trail camera images) that kittens are old enough to move out of harm's way independently of the female. Treatment activities will not occur within this buffer during this time to avoid disturbance, injury, or mortality of mountain lion nurseries.</p> <p><u>Northern California Ringtail</u></p> <p>▶ To avoid mortality or injury to ringtail the following will be implemented when broadcast burning or mechanical and manual large snag (i.e., greater than 12 inches DBH) removal are implemented during the maternity season (April 15–June 30).</p>			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>▶ Within 14 days prior to the start of broadcast burning, mechanical and manual tree and snag removal during the ringtail maternity season, a qualified RPF or biologist will conduct a den search in the treatment area to be treated during that 14-day period. The qualified RPF or biologist will search for den structures, such as hollow logs, snags, rock piles, and large trees and snags (i.e., greater than 12 inches DBH) with appropriate cavities (i.e., holes larger than 3 inches in diameter, with cavities extending approximately 12 inches down from the cavity hole). If found, the qualified biologist or RPF will inspect the cavity using a cell phone with a flash or other tools (e.g., borescopes) to determine whether ringtails are present, unless cavities are not safely accessible. Structures (e.g., large trees) with appropriate den habitat, whether verified as occupied or not, will be marked (e.g., with flagging), for avoidance during the maternity season.</p> <p>▶ Any potential den structures, where the biologist or qualified RPF is not able to determine if the structure is occupied or not, due to safety or access issues, will be retained until the end of the ringtail maternity season (June 30).</p> <p>If active ringtail dens are discovered during a den survey or during treatment activities, a no-disturbance buffer of 0.25 mile will be implemented around the den, and broadcast burning, mechanical and manual tree and snag removal that may result in the destruction or disturbance of the den and associated foraging habitat as determined by a qualified biologist or RPF will not proceed within the buffer until at least the end of the ringtail maternity season (June 30). The qualified RPF or biologist will confirm that the den is unoccupied before treatment activities resume. If an active den is discovered, CDFW will be notified of the den and buffer location. CDFW will be provided an opportunity to visit the site and provide technical information on the size and shape of the den buffer.</p>			
<p>Mitigation Measure BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species (All Treatment Activities)</p> <p>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.</p> <p><u>Avoid Mortality, Injury, or Disturbance of Individuals</u></p> <p>The project proponent will implement the following to avoid mortality, injury, or disturbance of individuals:</p> <p>▶ 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</p>	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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).</p> <ul style="list-style-type: none"> ▶ 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. <p><u>Maintain Habitat Function</u></p> <ul style="list-style-type: none"> ▶ For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following: ▶ While performing review and surveys for SPR BIO-1 and SPR BIO-10, a qualified RPF or biologist will identify any habitat features that are necessary for survival (e.g., habitat necessary for breeding, foraging, shelter, movement) of the affected wildlife species (e.g., trees with complex structure, trees with large cavities, trees with nesting platforms; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. ▶ If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that special-status wildlife with specific requirements for high canopy cover (e.g., northern goshawk, Sierra Nevada snowshoe hare) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted) such that the habitat function is maintained. 			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>▶ 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.</p> <p>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.</p> <p>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.</p> <p>Project-Specific Guidance to Implement Mitigation Measure BIO-2b</p> <p><u>Overwintering Monarch Butterfly</u></p> <p>▶ If stands are determined to be suitable for overwintering monarch butterflies, prescribed burning, mechanical, manual, targeted herbicide application, and prescribed herbivory treatments will not occur during the overwintering period. Furthermore, stands with documented use by overwintering monarch butterfly would be avoided if feasible. If it is not feasible to avoid treatments within stands with documented overwintering monarch butterflies while meeting project objectives, a treatment plan that maintains the suitability of these stands for overwintering monarchs will be implemented as described in <i>Protecting California's Butterfly Groves: Management Guidelines for Monarch Butterfly Overwintering Habitat</i> (Xerces 2017) and CDFW will be contacted prior to treatment to confirm best practices.</p> <p><u>Northwestern Pond Turtle</u></p> <p>▶ If northwestern pond turtles are detected during SPR BIO-10 focused surveys biological monitoring by a qualified RPF, biologist, biological technician, or trainee during prescribed burning, mechanical treatments, and manual tree and snag removal activities, within or adjacent to sensitive habitat areas will be implemented</p>			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>to avoid injury to or mortality of individuals. If the qualified RPF or biologist detects a southwest pond turtle during treatments, a non-disturbance buffer of 100 feet, or published agency distance, will be implemented around the individual unless it is determined by a qualified RPF, biologist, or RPF supervised designee that a different sized buffer is appropriate to avoid injury or mortality. Treatment activities will cease within the buffer until the animal has left the area or has been moved out of harm’s way and to other nearby habitat suitable for the species by the qualified RPF or biologist.</p> <ul style="list-style-type: none"> ▶ If northwestern pond turtle nests are detected during SPR BIO-10 surveys, nests will be flagged and prescribed burning, operation of mechanized equipment, and manual tree and snag removal, which may cause loss of nests, will not occur within 50 feet of northwestern pond turtle nests. <p>Other Special-Status Reptiles and Amphibians</p> <ul style="list-style-type: none"> ▶ If special-status reptiles or amphibians (i.e., California giant salamander, coast horned lizard, Santa Cruz black salamander) are detected during SPR BIO-10 focused surveys, or if California giant salamander, coast horned lizard, or Santa Cruz black salamander is assumed to be present, biological monitoring by a qualified RPF, biologist, biological technician, or trainee during prescribed burning, mechanical treatments, manual tree and snag removal activities, and herbicide application treatments within or adjacent to sensitive habitat areas will be implemented to avoid injury to or mortality of individual special-status reptiles or amphibians. If the qualified RPF or biologist detects a special-status reptile or amphibian during treatments, a non-disturbance buffer of 100 feet, or published agency distance, will be implemented around the individual unless it is determined by a qualified RPF, biologist, or RPF supervised designee that a different sized buffer is appropriate to avoid injury or mortality. Treatment activities will cease within the buffer until the animal has left the area or has been moved out of harm’s way and to other nearby habitat for the species by the qualified RPF or biologist. <p><u>Special-Status Birds</u></p> <ul style="list-style-type: none"> ▶ If an active black crowned night heron, black swift, loggerhead shrike, long-eared owl, olive-sided flycatcher, osprey, purple martin, saltmarsh common yellowthroat, sharp-shinned hawk, short-eared owl, Vaux’s swift, yellow-breasted chat, or yellow warbler nest is detected during SPR BIO-10 focused surveys, a no-disturbance buffer of at least 100 feet will be established around the nest. For American peregrine falcon, Cooper’s hawk and northern harrier nests the no-disturbance buffer will be 500 feet around the nest. For helicopter and drone operations, this buffer will be a vertical buffer as well as a horizontal buffer (e.g., 100 feet horizontal distance or 100 feet AGL). No treatment activities will occur within this buffer until the chicks have fledged as determined by a qualified RPF or biologist. The buffer distance may be modified by a qualified RPF or biologist based on presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, and expected treatment activities. <p><u>American Badger</u></p> <ul style="list-style-type: none"> ▶ If an active American badger den is detected within treatment areas during SPR BIO-10 focused surveys, a no-disturbance buffer of 100 feet would be established around active maternity dens, and installation of control lines and staging areas for prescribed burning, pile burning, mechanical treatment, manual treatment, and the setup of infrastructure for prescribed herbivory activities would not occur within this buffer during the 			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>pupping season (February 15–July 1). If an active American badger den is detected within treatment areas outside of the pupping season, where pile burning, installation of control lines and staging areas for prescribed burning, mechanical treatments, or the setup of infrastructure for prescribed herbivory activities are to be conducted, a buffer of 50 feet will be placed around the den.</p> <p><u>San Francisco Dusky-Footed Woodrat</u></p> <ul style="list-style-type: none"> ▶ A no-disturbance buffer of approximately 10 feet will be established around San Francisco dusky-footed woodrat nests or clusters of nests, and no pile burning, mechanical treatments, or manual treatments will be conducted within that buffer if feasible. The buffer may be estimated by field crews for mechanical treatments using remote-controlled masticators, manual treatments, and pile burning. For traditional mechanical treatments, a reasonable effort shall be made to electronically mark or physically flag the buffer; marking and/or flagging of nests may be reduced where there is a safety issue in accessing the nest. An electronic map will be provided to field crews and used for reference during traditional mechanical treatments. When visibility of a nest is limited, as determined by a qualified RPF or biologist during survey pursuant to SPR BIO-10, high-visibility flagging or other high visibility physical markers may be used to supplement electronic demarcation or visual estimation of the non-disturbance buffer. The buffer distances may be adjusted as needed by a qualified RPF or biologist to avoid impacts if needed. ▶ If San Francisco dusky-footed woodrat nests are located within prescribed burning treatment areas, or if presence of nests is assumed pursuant to SPR BIO-10, broadcast burning will not occur during the season when the majority of woodrat young are present in the nest (April through mid-July) to avoid loss of young woodrats, unless control lines can be established around the nest. ▶ In areas of existing woodrat habitat where pile burning would occur, pile burning will take place as soon as feasible to reduce the risk of woodrats occupying the debris piles. Prior to burning, debris piles should be disturbed to ensure any woodrats inside of the piles have the opportunity to escape. <p><u>Special-Status Bats</u></p> <p>If a special-status bat roost is detected during SPR BIO-10 focused surveys, a no-disturbance buffer of 250 feet will be established around the roost during the bat maternity season (April 1–August 31), and prescribed burning, mechanical treatments, and manual treatments and herbicide application using power equipment will not occur within this buffer until the roost is no longer being used as determined by a qualified RPF or biologist. The buffer distance may be modified by a qualified RPF or biologist based on presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, and expected treatment activities.</p>			
<p>Mitigation Measure BIO-2c: Compensate for Mortality, Injury, or Disturbance and Loss of Habitat Function for Special-Status Wildlife if Applicable (All Treatment Activities)</p> <p>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</p>			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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.</p> <p>Compensation may include:</p> <ol style="list-style-type: none"> 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). <p>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:</p> <ol style="list-style-type: none"> 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. <p>Review requirements are as follows:</p> <ul style="list-style-type: none"> ▶ 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. 			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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.</p> <p>Project-Specific Guidance to Implement Mitigation Measure BIO-2c</p> <p><u>Monarch butterfly</u></p> <p>If UC Santa Cruz does not implement the measures contained in SPR BIO-1, SPR BIO-10, Mitigation Measure BIO-2b, and Mitigation Measure BIO-2e for monarch butterfly, and treatment activities occur following adoption of the UC Santa Cruz campus wide Habitat Conservation Plan (HCP), the measures contained in the HCP be implemented and these measures would satisfy the requirements for compensatory mitigation for the species pursuant to this mitigation measure. Proposed applicable measures would include pre-activity surveys and avoidance and overwintering habitat avoidance.</p> <p><u>Ohlone tiger beetle</u></p> <p>If treatment activities occur following adoption of the HCP, the measures contained in the HCP and the associated incidental take permit would be implemented and would satisfy the requirements for compensatory mitigation for the species. These measures include monitoring treatment activities during the active season to determine if individuals are present, as well as work stoppage and relocation of individuals if any are found. If treatments occur prior to adoption of the Habitat Conservation Plan, or are not covered activities under the HCP, then the following measures would apply:</p> <p>To compensate for impacts to Ohlone tiger beetle, a Compensatory Mitigation Plan will be developed prior to initiating treatment activities within Ohlone tiger beetle habitat that includes 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. The Compensatory mitigation plan will also include the following measures to avoid impacts to Ohlone tiger beetle:</p> <ul style="list-style-type: none"> ▶ Conduct mechanical treatments other than mowing with light wheeled vehicles, ground disturbance associated with prescribed burning (e.g., construction of control lines) and pile burning outside of grassland habitat known to be occupied or potentially occupied by the species as determined by a qualified RPF or biologist if feasible. If conducting these treatments outside occupied or potentially occupied habitat is determined to be infeasible, then focused surveys will be implemented. ▶ Conduct mowing with light wheeled vehicles, manual treatments, broadcast burning, and targeted herbicide application outside of the sensitive season (the flight season which extends approximately January 15 to May 15) in grassland habitat known to be occupied or potentially occupied by the species as determined by a qualified RPF or biologist if feasible. If conducting these treatments outside of the flight season in occupied or potentially occupied habitat is determined to be infeasible, then focused surveys will be implemented. ▶ To avoid impacts on Ohlone tiger beetle, prior to conducting mechanical treatments other than mowing with light wheeled vehicles, ground disturbance associated with prescribed burning (e.g., construction of control 			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>lines) and pile burning year-round, or mowing with light wheeled vehicles, manual treatments, broadcast burning, and targeted herbicide application outside of the flight season (approximately January 15 to May 15) in grassland habitat known to be occupied or potentially occupied by the species, a focused survey for Ohlone tiger beetles and larval burrows will be conducted by a qualified RPF or biologist, or presence of the species will be assumed. If Ohlone tiger beetles or larval burrows are not detected during surveys no further measures are required. If the species is detected or assumed to be present further avoidance measures will be implemented.</p> <ul style="list-style-type: none"> ▶ If Ohlone tiger beetles are assumed to be present within the treatment area, then no treatment activities that result in ground disturbance (e.g., mechanical treatments other than mowing with light wheeled vehicles, control line construction) or pile burning will occur at any time of year, and mowing with light wheeled vehicles, manual treatments, broadcast burning, and targeted herbicide application will be conducted outside of the flight season (approximately January 15 to May 15). ▶ If focused surveys detect Ohlone tiger beetle or burrows, within the treatment area a 10-foot buffer will be placed around burrows and no ground disturbing activities will occur within this buffer. Furthermore, in treatment areas where Ohlone tiger beetles have been detected, mowing with light wheeled vehicles, manual treatments, broadcast burning, and targeted herbicide application will be conducted outside of the flight season (approximately January 15 to May 15). ▶ If Ohlone tiger beetle adults are found during treatment activities all work within 50 feet of the individual will stop and USFWS will be contacted to determine, when and if work may continue. <p><u>California red-legged frog</u></p> <p>If UC Santa Cruz does not implement the measures contained in SPR BIO-10 and Mitigation Measure BIO-2b for California red-legged frog, and treatment activities occur following adoption of the UC Santa Cruz campus wide Habitat Conservation Plan (HCP), the measures contained in the HCP and the associated incidental take permit would be implemented and these measures would satisfy the requirements for compensatory mitigation for the species pursuant to this mitigation measure. Proposed applicable measures are anticipated to include pre-activity clearance surveys, avoidance, including seasonal avoidance, monitoring during project activities, and construction of boundary fencing.</p> <p><u>Northwestern pond turtle</u></p> <p>If UC Santa Cruz does not implement the measures in SPR BIO-10 and Mitigation Measure BIO-2b for Northwestern pond turtle, and treatment activities occur following adoption of the UC Santa Cruz campus wide Habitat Conservation Plan (HCP), the measures contained in the HCP and the associated incidental take permit would be implemented and these measures would satisfy the requirements for compensatory mitigation for the species pursuant to this mitigation measure. Proposed applicable measures are anticipated to include pre-activity surveys, avoidance, and daily inspections during work periods.</p>			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>Mitigation Measure BIO-2e: Design Treatment to Retain Special-Status Butterfly Host Plants (All Treatment Activities) If federally listed butterflies are identified as occurring or having potential to occur during review and surveys for SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, then the following measures will be implemented:</p> <ul style="list-style-type: none"> ▶ Treatment areas within the range of these species will be surveyed for the host plant for each species (Table 3.6-34). ▶ Host plants for federally listed butterflies within the occupied habitat will be marked with high-visibility flagging, fencing, or stakes, and no treatment activities will occur within 10 feet of these plants. ▶ Because prescribed herbivory could result in the indiscriminate removal of the host plants for federally listed butterflies, this treatment type will not be used within occupied habitat of any federally listed butterfly species, unless it is known that the host plant is unpalatable to the herbivore. ▶ Treatment areas that are not occupied but are within the range of the federally listed butterfly will be divided into as many treatment units as feasible such that the entirety of the habitat is not treated within the same year. ▶ Treatments will be conducted in a patchy pattern to the extent feasible in areas that are not occupied but are within the range of the federally listed butterfly, such that the entirety of the habitat is not burned or removed and untreated portions of suitable habitat are retained. <p>If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of federally listed butterflies or degradation of occupied habitat (host plants) such that its function would not be maintained, the project proponent will implement Mitigation Measure BIO-2c.</p> <p>CESA and ESA Listed Species. A qualified RPF or biologist will determine if, after implementation of any feasible impact avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance, or after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed butterflies or degradation of occupied habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c.</p>	<p>Prior to and during all treatment activities</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Table 3.6-34 Special-Status Butterflies and Associated Host Plants

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

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>Other Special-status Species. A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA, because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status butterflies would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status butterflies or degradation of occupied habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented.</p> <p>The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status butterfly species would benefit from treatment in the occupied habitat area even though some may be killed, injured or disturbed during treatment activities. For a treatment to be considered beneficial to special-status butterfly species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources). If it is determined that treatment activities would be beneficial to special-status butterflies, no compensatory mitigation will be required.</p> <p>Project-Specific Guidance to Implement Mitigation Measure BIO-2e</p> <p>The measures described below have been tailored to the proposed treatments for monarch butterfly and are as follows:</p> <ul style="list-style-type: none"> ▶ If host plants for monarch butterfly are detected, and monarch eggs, larvae, and pupae are detected during focus surveys pursuant to SPR BIO-10 or assumed to be present, host plants will be marked with high-visibility flagging, fencing, or stakes, and no treatment activities (other than prescribed herbivory) will occur within 10 feet of these plants if feasible (unless, pursuant to SPR BIO-1, activities occur outside of the period March 15-October 31, when impacts to eggs, larvae, and pupae can be avoided). ▶ If monarch butterfly is detected during focused surveys pursuant to SPR BIO-10, or presence is assumed, treatments will be conducted in a patchy pattern to the extent feasible in grasslands, shrublands, and oak woodlands, such that the entirety of the habitat is not burned or removed and untreated portions of suitable habitat and floral resources are retained. 			
<p>Mitigation Measure BIO-2f: Avoid Habitat for Special-Status Beetles, Flies, Grasshoppers, and Snails (All Treatment Activities)</p> <p>If treatment activities would occur within the limited range of any state or federally listed beetle, fly, grasshopper, or snail, and these species are identified as occurring or having potential to occur due to the presence of potentially suitable habitat during review and surveys for SPR BIO-1 and surveys for SPR BIO-10, then the following measures will be implemented:</p>	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<ul style="list-style-type: none"> ▶ To avoid and minimize impacts to Mount Hermon June beetle and Zayante band-winged grasshopper, treatment activities will not occur within "Sandhills" habitat in Santa Cruz County, the only suitable habitat for these species. ▶ To avoid and minimize impacts to Casey's June beetle, Delhi Sands flower-loving fly (<i>Rhaphiomidas terminates abdominalis</i>), Delta green ground beetle (<i>Elaphrus viridis</i>), Morro shoulderband snail, Ohlone tiger beetle (<i>Cicindela ohlone</i>), and Trinity bristle snail, treatment activities will not occur within habitat in the range of these species that is deemed suitable by a qualified RPF or biologist with familiarity of the species. <p>Project-Specific Implementation to Implement Mitigation Measure BIO-2f</p> <p>If treatment activities would occur within habitat suitable for Ohlone tiger beetle, then the provisions of Mitigation Measure BIO-2f would not be met and Mitigation Measure BIO-2c would be implemented.</p>			
<p>Mitigation Measure BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees (All Treatment Activities)</p> <p>If special-status bumble bees are identified as occurring during review and surveys under SPR BIO-1 and confirmed during protocol-level surveys per SPR BIO-10, or if suitable habitat for special-status bumble bees is identified during review and surveys under SPR BIO-1 (e.g., wet meadow, forest meadow, riparian, grassland, or coastal scrub habitat containing sufficient floral resources within the range of the species), then the project proponent will implement the following measures, as feasible:</p> <ul style="list-style-type: none"> ▶ Prescribed burning within occupied or suitable habitat for special-status bumble bees will occur from October through February to avoid the bumble bee flight season. ▶ Treatment areas in occupied or suitable habitat will be divided into a sufficient number of treatment units such that the entirety of the habitat is not treated within the same year; the objective of this measure is to provide refuge for special-status bumble bees during treatment activities and temporary retention of suitable floral resources proximate to the treatment area. ▶ Treatments will be conducted in a patchy pattern to the extent feasible in occupied or suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of unburned floral resources for special-status bumble bees within the treatment area). ▶ Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March through September). <p>CESA and ESA Listed Species. A qualified RPF or biologist will determine if, after implementation of feasible avoidance measures (potentially including others not listed above), the treatment will result in mortality, injury, or disturbance to the species, or if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed bumble bees (in the event the Candidate listing is confirmed) or degradation of</p>	<p>During all treatment activities (if special-status bumble bees are identified during surveys or assumed to be present).</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>occupied (or assumed to be occupied) habitat such that its function would not be maintained would occur, the project proponent will implement Mitigation Measure BIO-2c.</p> <p>Other Special-status Species. A qualified RPF or biologist with knowledge of the special-status species' habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA because implementation of the treatment will not maintain habitat function of the special-status species' habitat or because the loss of special-status individuals would substantially reduce the number or restrict the range of a special-status species. If the project proponent determines the impact on special-status bumble bees would be less than significant, no further mitigation will be required. If the project proponent determines that the loss of special-status bumble bees or degradation of occupied (or assumed to be occupied) habitat would be significant under CEQA after implementing feasible treatment design alternatives and impact minimization measures, then Mitigation Measure BIO-2c will be implemented.</p> <p>The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or biologist that the special-status bumble bee species would benefit from treatment in the occupied (or assumed to be occupied) habitat area even though some of the non-listed special-status bumble bees may be killed, injured, or disturbed during treatment activities. For a treatment to be considered beneficial to special-status bumble bee species, the qualified RPF or biologist will demonstrate with substantial evidence that habitat function is reasonably expected to improve with implementation of the treatment (e.g., by citing scientific studies demonstrating that the species (or similar species) has benefitted from increased sunlight due to canopy opening, eradication of invasive species, or otherwise reduced competition for resources), and the substantial evidence will be included in the PSA. If it is determined that treatment activities would be beneficial to special-status bumble bees, no compensatory mitigation will be required.</p>			
<p>Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands</p> <p>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:</p> <ul style="list-style-type: none"> ▶ Reference the <i>Manual of California Vegetation</i>, Appendix 2, Table A2, <i>Fire Characteristics</i> (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 <i>Fire in California's Ecosystems</i> (Van Wagtenonk et al. 2018) and the <i>Manual of California Vegetation</i> (Sawyer et al. 2009 or 	<p>Prior to and during treatment activities in areas that contain sensitive natural communities or oak woodlands.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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.</p> <ul style="list-style-type: none"> ▶ 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 <i>Fire in California's Ecosystems</i> (Van Wagtendonk et al. 2018) and the <i>Manual of California Vegetation</i> (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. <p>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).</p> <p>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</p>			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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.</p> <p>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.</p> <p>Project-Specific Guidance to Implement Mitigation Measure BIO-3a</p> <ul style="list-style-type: none"> ▶ To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled). ▶ Maintenance treatments outside of the natural fire return interval of the native vegetation alliance being treated would occur only in areas where a qualified RPF or botanist determines that the goal of the initial treatment to restore the sensitive natural community to Condition Class 1 (i.e., natural vegetation composition, structure, and fuels) was not achieved with initial treatments implemented within the natural fire return interval. In those instances, lower intensity, targeted maintenance activities may be implemented outside of the natural fire return interval to achieve these goals. These lower intensity maintenance activities would consist of targeted removal of dead, dying, and diseased trees, and invasive species; or select thinning of regenerating trees and shrubs to achieve desired density consistent with healthy examples of the vegetation alliance being treated. ▶ Prior to any ecologically restorative treatments in chaparral sensitive natural communities, a qualified RPF or botanist will prepare a treatment prescription including the following items. The prescription will be provided to Coastal Commission staff for Executive Director review and approval prior to treatment implementation. <ul style="list-style-type: none"> ▪ retention standards designed specifically to maintain the habitat value and natural species diversity, abundance, and composition of the sensitive natural community being treated; ▪ a list of SPRs and Mitigations Measures that would apply to treatment implementation; ▪ evidence that treatments will be conducted within the natural fire return interval (see above bullet for maintenance treatments); ▪ methods to maintain the alliance level membership rules from the most current edition of <i>A Manual of California Vegetation</i>; and 			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<ul style="list-style-type: none"> ▪ treatments will be designed to maintain or improve the habitat value and functional capacity of the vegetation type compared to its existing condition and will maintain the natural species diversity, abundance, and composition of the sensitive natural community being treated. ▶ If it is not feasible to apply prescribed burning as the primary treatment activity in a fire dependent sensitive natural community because of hazardous fuel loads, either the fire dependent sensitive natural community will be avoided or, if avoidance is not an option because avoidance would not meet CalVTP program objectives (e.g., ecological restoration, community protection), manual and mechanical pretreatment activities may be employed to reduce fuel loads (e.g., dead standing vegetation) prior to implementing prescribed burning. If the project proponent determines that using prescribed burning as the primary treatment is infeasible and avoidance of the fire dependent sensitive natural community is also infeasible, the reasons manual or mechanical pretreatment is needed before implementing prescribed burning will be submitted to the Coastal Commission for Executive Director review and approval. This will also be documented in the post-project implementation report. 			
<p>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:</p> <ul style="list-style-type: none"> ▶ Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by: <ul style="list-style-type: none"> ▪ 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: <ol style="list-style-type: none"> 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 	Prior to and during treatment activities	UC Santa Cruz	UC Santa Cruz

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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.</p> <p>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.</p>			
<p>Mitigation Measure BIO-3c: Compensate for Unavoidable Loss of Riparian Habitat</p> <p>If, after implementation of SPR BIO-4, impacts to riparian habitat remain significant under CEQA, the project proponent will implement the following:</p> <ul style="list-style-type: none"> ▶ Compensate for unavoidable losses of riparian habitat acreage and function by: <ul style="list-style-type: none"> ▪ 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: <ol style="list-style-type: none"> 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. <p>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.</p>	<p>Prior to and during treatment activities</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>Mitigation Measure BIO-4: Avoid State and Federally Protected Wetlands</p> <p>Impacts to wetlands will be avoided using the following measures:</p> <ul style="list-style-type: none"> ▶ 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' 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: <ul style="list-style-type: none"> ▪ 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. <p>No fire ignition (and associated use of accelerants) will occur within the wetland buffer.</p> <p>Revisions to the Mitigation Measure:</p> <p>Text of the original Mitigation Measure will be removed and replaced with new language.</p> <p>The original language states, "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."</p>	<p>Prior to and during all treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>▶ Only prescribed (broadcast) burning may be implemented in wetland habitats if it is determined by a qualified RPF or biologist that:</p> <ul style="list-style-type: none"> ▪ 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.” The revised language states, “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. <p>▶ Only prescribed (broadcast) burning and non-ground disturbing mechanical treatments that reach into wetland with an excavator arm may be implemented in wetland habitats if it is determined by a qualified RPF or biologist that:</p> <ul style="list-style-type: none"> ▪ No special-status species are present in the wetland habitat ▪ The wetland habitat function would be maintained. ▪ The prescribed burning or non-ground disturbing mechanical treatments (as described above) is within the normal fire return interval for the wetland vegetation types present. ▪ Fire containment lines and pile burning are prohibited within the buffer.” <p>Project-Specific Implementation to Implement Mitigation Measure BIO-4</p> <p>In addition to those wetlands defined as waters of the state or federally protected waters, wetlands will include Coastal Act wetlands where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes. Impacts to all wetlands (i.e., state protected wetlands, federally protected wetlands, wetlands meeting the definition of Coastal Act wetlands) will be avoided using the measures listed above and the following:</p> <p>Within wetland boundaries: Treatment activities will be limited within wetland boundaries to those that would restore ecological benefits to the wetlands or would maintain wetland habitat quality while improving surrounding ecosystems, including other ESHAs.</p>			

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
<p>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:</p> <ul style="list-style-type: none"> ▶ 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. 	<p>During treatment activities in areas that contain nursery sites (if nursery sites are identified during surveys).</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>
<p>Greenhouse Gas Emissions</p>			
<p>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 <i>National Wildfire Coordinating Group Smoke Management Guide for Prescribed Fire</i> (NWCG 2020):</p> <ul style="list-style-type: none"> ▶ 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. <p>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.</p> <p>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.</p>	<p>Prior to and during prescribed burning treatment activities.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

Mitigation Measures	Timing	Implementing Entity	Verifying/Monitoring Entity
Hazardous Materials, Public Health and Safety			
<p>Mitigation Measure HAZ-3: Identify and Avoid Known Hazardous Waste Sites Prior to the start of vegetation treatment activities requiring soil disturbance (i.e., mechanical treatments) or prescribed burning, CAL FIRE and other project proponents will make reasonable efforts to check with the landowner or other entity with jurisdiction (e.g., California Department of Parks and Recreation) to determine if there are any sites known to have previously used, stored, or disposed of hazardous materials. If it is determined that hazardous materials sites could be located within the boundary of a treatment site, the project proponent will conduct a DTSC EnviroStor web search (https://www.envirostor.dtsc.ca.gov/public/) and consult DTSC's Cortese List to identify any known contamination sites within the project site. If a proposed mechanical treatment or prescribed burn is located on a site included on the DTSC Cortese List as containing potential soil contamination that has not been cleaned up and deemed closed by DTSC, the area will be marked and no prescribed burning or soil disturbing treatment activities will occur within 100 feet of the site boundaries. If it is determined through coordination with landowners or after review of the Cortese List that no potential or known contamination is located on a project site, the project may proceed as planned.</p>	<p>During PSA/Addendum preparation Database searches are complete; see PSA/Addendum for results.</p>	<p>UC Santa Cruz</p>	<p>UC Santa Cruz</p>

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