



CalVTP PSA ID 2023-22

Attachment A

Mitigation and Monitoring Reporting Program



A.1 Tunnel East Bay Hill Shaded Fuel Break Project: Mitigation Monitoring and Reporting Program

Standard Project Requirements

STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	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 on site; 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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior-during</p>	<p>MOFD</p>	<p>MOFD</p>
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to treatment</p>	<p>MOFD</p>	<p>MOFD</p>
<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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during treatment</p>	<p>MOFD</p>	<p>MOFD</p>
<p>SPR AD-4 Public Notifications for Prescribed Burning: At least X days (to be determined by the Project Owner) 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; and 3) send the local county supervisor and county administrative officer (or equivalent official responsible for</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior At least 3 days prior to prescribed burn treatment activities</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
distribution of public information) a notification letter describing the activity, its necessity, timing, and measures being taken to protect the environment and prevent prescribed burn escape. This SPR applies only to prescribed burn treatment activities and all treatment types, including treatment maintenance.				
SPR AD-5 Maintain Site Cleanliness: If trash receptacles are used on-site, the project proponent will use fully covered trash receptacles with secure lids (wildlife proof) to contain all food, food scraps, food wrappers, beverages, and other worker generated miscellaneous trash. Remove all temporary non-biodegradable flagging, trash, debris, and barriers from the Project site upon completion of project activities. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During Prior to, during, and following treatment	MOFD	MOFD
SPR AD-6 Public Notifications for Treatment Projects. One to three days prior to the commencement of a treatment activity, the project proponent will post signs in a conspicuous location near the treatment area describing the activity and timing and requesting persons in the area to contact a designated representative of the project proponent (contact information will be provided with the notice) if they have questions or concerns. This SPR applies to all treatment activities and all treatment types, including treatment maintenance. Prescribed burning is subject to the additional notification requirements of SPR AD-4.	Initial Treatment: Y Treatment Maintenance: Y	Prior 1–3 days prior to treatment activities	MOFD	MOFD
<p>SPR AD-7 Provide Information on Proposed, Approved, and Completed Treatment Projects. For any vegetation treatment project using the CalVTP PEIR for CEQA compliance, the project proponent will provide the information listed below to the Board or CAL FIRE during the proposed, approved, and completed stages of the project. The Board or CAL FIRE will make this information available to the public via an online database or other mechanism.</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); • 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 no later than two</p>	Initial Treatment: Y Treatment Maintenance: Y	Prior, during, post	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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>Information on completed projects:</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; and ○ Any explanations regarding implementation if required by SPRs and mitigation measures (e.g., explanation for feasibility determination required by SPR BIO-12; explanation for reduction of a no-disturbance buffer below the general minimum size described in Mitigation Measures BIO-1a and BIO-2b). <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. 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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Annually</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/ MONITORING ENTITY
<p>SPR AD-9: Obtain a Coastal Development Permit for Proposed Treatment Within the Coastal Zone Where Required. When planning a treatment project within the Coastal Zone, the project proponent will contact the local Coastal Commission district office, or applicable local government to determine if the Project area is within the jurisdiction of the Coastal Commission, a local government with a certified Local Coastal Program (LCP), or both. All treatment projects in the Coastal Zone will be reviewed by the local Coastal Commission district office or local government with a certified LCP (in consultation with the local Coastal Commission district office regarding whether a Coastal Development Permit [CDP] is required). If a CDP is required, the treatment project will be designed to meet the following conditions:</p> <ul 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>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior, during</p>	<p>MOFD</p>	<p>MOFD</p>
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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>
<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. Example of a smoke management plan is in Appendix PD-2. This SPR applies only to prescribed burning treatment activities and all treatment types, including treatment maintenance.</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior</p>	<p>MOFD</p>	<p>MOFD</p>
<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> <p><i>Project-Specific Implementation</i></p> <p>Project design includes a fire restriction zone. No fire ignition (nor use of associated accelerants) would occur within 50 feet of listed plants, riparian habitat or aquatic features, AWS habitat, or any identified sensitive species, habitat, or resource.</p> <p>In habitat suitable for Alameda whipsnake suitable winter retreats (e.g., within native scrub habitat, rock outcrops within approximately 50 feet of scrub habitat), as determined by a qualified RPF or biologist, prescribed burning would</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>not occur between approximately November 1 and March 31 (as determined by a qualified biologist based on temperature and weather conditions) in order to avoid potential disturbance of hibernating Alameda whipsnake.</p> <p>Prescribed burning and pile burning would be restricted to when temperatures are conducive to AWS movement, which is typically when soil surface temperatures reach 66°F (19°C) (Hammerson 1979).</p>				
<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. • 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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD/Contractor</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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>	<p>Initial Treatment: N Treatment Maintenance: N</p>	N/A	N/A	N/A
<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), which 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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During prescribed burn treatment activities</p>	MOFD	MOFD
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 applicable agency guidance. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p>	<p>Initial Treatment: Y Treatment Maintenance: N</p>	Prior	MOFD	MOFD
<p>SPR CUL-2 Contact Geographically Affiliated Native American Tribes: The project proponent will obtain the latest 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. 	<p>Initial Treatment: Y Treatment Maintenance: N</p>	Prior	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> 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>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>Initial Treatment: Y Treatment Maintenance: N</p>	<p>Prior</p>	<p>MOFD</p>	<p>MOFD</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>Initial Treatment: Y Treatment Maintenance: N</p>	<p>Prior</p>	<p>MOFD</p>	<p>MOFD</p>
<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</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior, during</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
will be included in the survey report in accordance with applicable state or local agency procedures. This SPR applies to all treatment activities and treatment types, including treatment maintenance.				
SPR CUL-6 Treatment of Tribal Cultural Resources: The project proponent, in consultation with the culturally affiliated tribe(s), will develop effective protection measures for important Tribal cultural resources located within treatment areas. These measures may include adjusting the treatment location or design to entirely avoid cultural resource locations or changing treatment activities so that damaging effects to cultural resources will not occur. The project proponent will provide the tribe(s) the opportunity to submit comments and participate in consultation to resolve issues of concern. The project proponent will defer implementing the treatment until the tribe approves protection measures, or if agreement cannot be reached after a good-faith effort, the proponent determines that any or all feasible measures have been implemented, where feasible, and the resource is either avoided or protected. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior, during	MOFD	MOFD
SPR CUL-7 Avoid Built Historical Resources: If the records search identifies built historical resources, as defined in Section 15064.5 of the State CEQA Guidelines, the project proponent will avoid these resources. Within a buffer of 100 feet of the built historical resource, there will be no prescribed burning or mechanical treatment activities. Buffers less than 100 feet for built historical resources will only be used after consultation with and receipt of written approval from a qualified archaeologist. If the records search does not identify known historical resources in the treatment area, but structures (i.e., buildings, bridges, roadways) over 50 years old that have not been evaluated for historic significance are present in the treatment area, they will similarly be avoided. This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior, during	MOFD	MOFD
SPR CUL-8 Cultural Resource Training: The project proponent will train all crew members and contractors implementing treatment activities on the protection of sensitive archaeological, historical, or Tribal cultural resources. Workers will be trained to halt work if archaeological resources are encountered on a treatment site and the treatment method consists of physical disturbance of land surfaces (e.g., soil disturbance). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior and during treatment	MOFD	MOFD
Biological Resources Standard Project Requirements				
SPR BIO-1: Review and Survey Project-Specific Biological Resources. The project proponent will require a qualified RPF or biologist to conduct a data review and reconnaissance-level survey prior to treatment, no more than one year prior to the submittal of the PSA, and no more than one year between completion of the PSA and implementation of the treatment project. The data reviewed will include the biological resources setting, species	Initial Treatment: Y Treatment Maintenance: Y	Prior to treatment and treatment maintenance	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>and sensitive natural communities tables, and habitat information in this PEIR for the ecoregion(s) where the treatment will occur. It will also include review of the best available, current data for the area, including vegetation mapping data, species distribution/range information, the California Natural Diversity Database (CNDDB), California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California, relevant BIOS queries, and relevant general and regional plans. Reconnaissance-level biological surveys will be general surveys that include visual and auditory inspection for biological resources to help determine the environmental setting of a Project site. The qualified surveyor will 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 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>Initial data review and reconnaissance-level survey have been conducted; see Attachment B for results.</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</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to and during Prior to treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>physical avoidance, a buffer may be implemented as determined necessary by the qualified RPF or biologist.</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, National Oceanic and Atmospheric Administration (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>SPR BIO-2: Require Biological Resource Training for Workers. The project proponent will require crew members and contractors to receive training from a qualified RPF or biologist prior to beginning a treatment project. The training will describe the appropriate work practices necessary to effectively implement the biological SPRs and mitigation measures and to comply with the applicable environmental laws and regulations. The training will include the identification, relevant life history information, and avoidance of pertinent special-status species; identification and avoidance of sensitive natural communities and habitats with the potential to occur in the treatment area; impact minimization procedures; and reporting requirements. The training will instruct workers when it is appropriate to stop work and allow wildlife encountered during treatment activities to leave the area unharmed and when it is necessary to report encounters to a qualified RPF, biologist, or biological technician. The qualified RPF, biologist, or biological technician will immediately contact CDFW or USFWS, as appropriate, if any wildlife protected by CESA or 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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD;</p>
Sensitive Natural Communities and Other Sensitive Habitats				
<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 most current CDFW 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>protocols (2023a) 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; CNPS 2023), or referring to relevant reports (e.g., reports found on the VegCAMP website).</p> <ul style="list-style-type: none"> Map and digitally record, using a Global Positioning System unit, 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><i>Project-Specific Implementation</i></p> <p>A survey for sensitive vegetation communities would be conducted prior to treatment to ensure they are identified and treatment avoids communities with a rank of S1 or S2. Implementation of SPR BIO-1 and the survey required under SPR BIO-3 would ensure any riparian habitat, sensitive communities, or oak woodlands would be identified. In accordance with the Project description, all riparian areas would be avoided, and no work would occur within riparian habitats. Riparian habitats would be avoided with a 50-foot buffer, but buffers may be increased based on recommendations of a qualified biologist and/or factors such as slope, existing erosion, sensitivity of the vegetative habitat, or presence of sensitive resources. SPR BIO-5 would ensure that treatment is designed to maintain or enhance habitat function of coastal scrub communities, and the Project is currently designed to remove only invasive plants and remove dead, woody native vegetation to avoid type conversion. SPR BIO-6 requires that best management practices be employed to avoid the spread of plant pathogens; and SPR BIO-9 prescribes actions to prevent the spread of invasive plants.</p> <p>The aquatic habitat in the vicinity of the Project area has been excluded from the Project area during design of the treatments.</p> <p>Implementation of water quality protections in accordance with SPR HYD-1, identifying Watercourse and Lake Protection Zones and establishing no-work buffers in accordance with SPR HYD-4, and SPR BIO-9 would minimize potential for invasive species spread in protected wetlands and riparian areas.</p> <p>Under MM BIO-3a, the qualified biologist would determine the natural fire regime, condition class, and fire return interval for each sensitive natural community and oak woodland type. Treatment activities in sensitive natural communities and oak woodlands would be designed to restore the natural fire regime and return vegetation composition and structure to their natural condition to maintain or improve habitat function.</p> <p>Work in AWS scrub habitat will be restricted to hand tools only, and vegetation removal will include dead, woody branches, and invasive plants. The nature of shaded fuel break work will not change the habitat functions of dispersal and</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>foraging of species occurring within, including AWS. In habitat suitable for Alameda whipsnake suitable winter retreats (e.g., within native scrub habitat, rock outcrops within approximately 50 feet of scrub habitat), as determined by a qualified RPF or biologist, prescribed burning would not occur between approximately November 1 and March 31 (as determined by a qualified biologist based on temperature and weather conditions) in order to avoid potential disturbance of hibernating Alameda whipsnake. Prescribed burning and pile burning would be restricted to when temperatures are conducive to AWS movement, which is typically when soil surface temperatures reach 66°F (19°C) (Hammerson 1979).</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 region. This includes hand removal (or mechanized removal where topography allows) of dead or dying riparian trees and shrubs, invasive plant removal, selective thinning, and removal of encroaching upland species. • Removal of large, native riparian hardwood trees (e.g., willow, ash, maple, oak, alder, sycamore, cottonwood) will be minimized to the extent feasible and 75 percent of the pretreatment native riparian hardwood tree canopy will be retained. Because tree size varies depending on vegetation type present and site conditions, the tree size retention parameter will be determined on a site-specific basis depending on vegetation type present and setting; however, live, healthy, native trees that are considered large for that type of tree and large relative to other trees in that location will be retained. A scientifically based, project-specific explanation substantiating the retention size parameter for native riparian hardwood tree removal will be provided in the Biological Resources Discussion of the PSA. Consideration of factors such as site hydrology, erosion potential, suitability of wildlife habitat, presence of sufficient seed trees, light availability, and changes in stream shading may inform the tree size retention requirements. • Removed trees will be felled away from adjacent streams or waterbodies and piled outside of the riparian vegetation zone (unless there is an ecological reason to do otherwise that is approved by applicable 	<p>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>regulatory agencies, such as adding large woody material to a stream to enhance fish habitat [e.g., see National Marine Fisheries Service et al. 2018]).</p> <ul style="list-style-type: none"> Vegetation removal that could reduce stream shading and increase stream temperatures will be avoided. Ground disturbance within riparian habitats will be limited to the minimum necessary to implement effective treatments. This will consist of the minimum disturbance area necessary to reduce hazardous fuels and return the riparian community to a natural fire regime (i.e., Condition Class 1) considering historic fire return intervals, climate change, and land use constraints. Only hand application of herbicides approved for use in aquatic environments will be allowed and only during low-flow periods or when seasonal streams are dry. The project proponent will notify CDFW when required by California Fish and Game Code Section 1602 prior to implementing any treatment activities in riparian habitats. Notification will identify the treatment activities, map the vegetation to be removed, identify the impact avoidance identification methods to be used (e.g., flagging), and appropriate protections for the retention of shaded riverine habitat, including buffers and other applicable measures to prevent erosion into the waterway. In consideration of spatial variability of riparian vegetation types and condition and consistent with California Forest Practice Rules Section 916.9(v) (February 2019 version; CAL FIRE 2019), a different set of vegetation retention standards and protection measures from those specified in the above bullets may be implemented on a site-specific basis if the qualified RPF and the project proponent demonstrate through substantial evidence that alternative design measures provide a more effective means of achieving the treatment goals objectives and would result in effects to the Beneficial Functions of Riparian Zones equal or more favorable than those expected to result from application of the above measures. Deviation from the above design specifications, different protection measures and design standards will only be approved when the treatment plan incorporates an evaluation of beneficial functions of the riparian habitat and with written concurrence from CDFW. <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p><i>Project-Specific Implementation</i></p> <p>In accordance with the Project description, all riparian areas would be avoided, and no work would occur within riparian habitats. Riparian habitats would be avoided with a 50-foot buffer, but buffers may be increased based on recommendations of a qualified biologist and/or factors such as slope, existing erosion, sensitivity of the vegetative habitat, or presence of sensitive resources.</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub. The project proponent will design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present. An ecological definition of type conversion is used in the CalVTP PEIR for assessment of environmental effects: a change from a vegetation type dominated by native shrub species that are characteristic of chaparral and coastal sage scrub vegetation alliances to a vegetation type characterized predominantly by weedy herbaceous cover or annual grasslands. For the PEIR, type conversion is considered in terms of habitat function, which is defined here as the arrangement and capability of habitat features to provide refuge, food source, and reproduction habitat to plants and animals, and thereby contribute to the conservation of biological and genetic diversity and evolutionary processes (de Groot, Wilson, and Boumans 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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to and during treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>These SPR requirements apply to all treatment activities and all treatment types, including treatment maintenance.</p> <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 PEIR, such as geographic context. It is beyond the legal scope of the PEIR to define SB 1260 type conversion and statutory compliance. The project proponent, acting as lead agency for the proposed later treatment project, will be responsible for defining type conversion in the context of the project and making the finding that type conversion would not occur, as required by SB 1260. The project proponent will</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>determine its criteria for defining and avoiding type conversion and, in making its findings, may draw upon information presented in this PEIR.</p>				
<p>SPR BIO-6: Prevent Spread of Plant Pathogens. When working in sensitive natural communities, riparian habitats, or oak woodlands that are at risk from plant pathogens (e.g., lone chaparral, blue oak woodland), the project proponent will implement the following best management practices to prevent the spread of <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; • 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 (UC Cooperative Extension et al. 2016). <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p><i>Project-Specific Implementation</i></p> <p><i>Phytophthora ramorum</i> is a harmful fungal pathogen that can cause mortality in several oak tree species and causes twig and foliar diseases in numerous native shrub and tree species. <i>P. ramorum</i> has devastated oak stands throughout Contra Costa and Alameda Counties open spaces, and minimizing its spread is a priority during project activities. The pathogen is spread through the broadcasting of infected material and by wetted soil clinging to boots and equipment. To contain the spread of <i>P. ramorum</i>, crews will minimize the movement of soil and leaf litter under and around infected trees. Boots, treads, and equipment such as saws, shovels, hoes, and other tools will be scrubbed free of soil and debris that come from infected sites. All reasonable methods to sanitize shoes and equipment will be used in areas with susceptible species both before and after work in those</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to, during treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>areas. These methods will include disinfecting material with 10% bleach, Lysol, or 70% isopropyl alcohol after the surface has been scrubbed free of debris with bristle brushes.</p> <p>Any material suspected of being infected must stay in the area, as close to the origin point as possible. Generally, removal of <i>P. ramorum</i>-infected or killed oak trees is only necessary if the tree is considered hazardous in a park setting. When infected oaks are cut down and left on-site, the branches will be chipped and cut and split, if possible, to reduce fire hazard and facilitate decomposition. If chipping is not possible, material will be lopped and scattered downslope and away from host species to reduce fire hazard and further spread. When debris may not be left, infested material will be disposed of at an approved and permitted dump facility.</p>				
Special-Status Plants				
<p>SPR BIO-7: Survey for Special-Status Plants. If SPR BIO-1 determines that suitable habitat for special-status plant species is present and cannot be avoided, the project proponent will require a qualified RPF or botanist to conduct protocol-level surveys for special-status plant species with the potential to be affected by a treatment prior to initiation of the treatment. The survey will follow the surveying and evaluation methods for special-status plants and sensitive natural communities (CDFW 2018).</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. For other special-status plants not listed under CESA or ESA, as defined in Section 3.6.1 of this PEIR, surveys will not be required under the following circumstances:</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 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to and during treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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> <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p><i>Project-Specific Implementation</i></p> <p>Protocol-level surveys would be conducted for special-status plants listed under ESA or CESA and perennial non-listed species prior to implementation of treatments. For special-status plants not listed under ESA or CESA, if the limited operating period for annual and perennial geophyte species (i.e., non-ground-disturbing treatment activities conducted during the dormant season) is determined to be infeasible, then protocol-level surveys for these species would be conducted prior to implementation of treatments. No fire ignition (nor use of associated accelerants) would occur within 50 feet of listed plants. No new roads would be created as part of Project activities.</p> <p>MMs BIO-1a and BIO-1b: special-status plants identified during protocol-level surveys would be given a no-disturbance buffer of at least 50 feet within which mechanical treatment and manual treatment would not occur unless a qualified biologist determines that the species would benefit from treatment in the occupied habitat area. Additionally, all state and federally protected wetlands would be avoided (MM BIO-4) by a standard buffer of 50 feet, and would be adjusted if slopes or other conditions warrant an increased buffer. Mitigation of the sixteen plant species with moderate to high potential to occur is considered based on persistence of detection throughout their lifecycles. MMs BIO-1a and BIO-1b would be required when the following conditions are met:</p> <ul style="list-style-type: none"> • where sensitive species are known to occur • when treatments cannot be completed in the dormant season, or the species are persistent year-round due to its lifecycle (woody or non-dormant) • when treatments would be implemented during the growing period of sensitive annual and geophyte species • where protocol-level surveys are required (per SPR BIO-7) and special-status plants are identified during these surveys <p><u>Impacts to Annual Forbs</u></p> <p>Plant species exhibiting seasonal vegetative growth and flowering, followed by a dormant period where the vegetation dries after seeding, and new individuals are expected to grow subsequent years in the same general vicinity include:</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • Bent-flowered fiddleneck (<i>Amsinckia lunaris</i>) • Congdon’s tarplant (<i>Centromadia parryi</i> ssp. <i>congdonii</i>) • Bristly leptosiphon (<i>Leptosiphon acicularis</i>) • Oregon meconella (<i>Meconella oregana</i>) • Woodland woollythreads (<i>Monolopia gracilens</i>) • Michael’s rein orchid (<i>Piperia michaelii</i>), and • Caper-fruited tropidocarpum (<i>Tropidocarpum capparideum</i>) <p>To avoid impacts on herbaceous annual forb species, focused botanical surveys would be performed during the appropriate bloom period for each of these species (MM BIO-1a and MM BIO-1b). If these species are detected, they would be recorded using a GPS and mapped. Special-status plants identified during protocol-level surveys would be given a no-disturbance buffer of 50 feet within which vegetation treatment activities would not occur unless a qualified biologist determines that the species would benefit from treatment in the occupied habitat area. The size and shape of the generally 50-foot buffer may be adjusted if a qualified RPF or botanist determines that a smaller or larger buffer would be sufficient to avoid impacts on listed plants. If pre-treatment surveys identify species within the same genus of each of these species, these individuals would be treated as potentially special status species and would be offered the same protective buffer for avoidance.</p> <p><u>Impacts to Perennial Forbs</u></p> <p>Plant species exhibiting seasonal vegetative growth and flowering, followed by a dormant period where the vegetation dries and the plant is difficult to locate, but the plant is expected to be persistent underground during dormancy and to grow subsequent years in the same location include:</p> <ul style="list-style-type: none"> • Big-scale balsamroot (<i>Balsamorhiza macrolepis</i>) • Big tarplant (<i>Blepharizonia plumosa</i>) • Mt. Diablo fairy lantern (<i>Calochortus pulchellus</i>) • Diablo helianthella (<i>Helianthella castanea</i>) <p>To avoid impacts on herbaceous perennial forb species, focused botanical surveys would be performed during the appropriate bloom period for each of these species (MM BIO-1a and MM BIO-1b). If these species are detected, they would be recorded using a GPS and mapped. Special-status plants identified during protocol-level</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>surveys would be given a no-disturbance buffer of 50 feet within which vegetation treatment activities would not occur unless a qualified biologist determines that the species would benefit from treatment in the occupied habitat area. The size and shape of the generally 50-foot buffer may be adjusted if a qualified RPF or botanist determines that a smaller or larger buffer would be sufficient to avoid impacts on listed plants. If pre-treatment surveys identify species within the same genus of each of these species, these individuals would be treated as potentially special status species and would be offered the same protective buffer for avoidance.</p> <p><u>Impacts to Woody Shrubs, Trees, and Vines</u></p> <p>Plant species exhibiting seasonal vegetative growth and flowering, which may or may not include a period of dormancy, and the plant is expected to be persistent above ground and detectable year-round include woody shrubs, trees, and vines:</p> <ul style="list-style-type: none"> • Western leatherwood (<i>Dirca occidentalis</i>) • Loma Prieta hoita (<i>Hoita strobilina</i>) • California black walnut (<i>Juglans californica</i>) • Oval-leaved viburnum (<i>Viburnum ellipticum</i>) <p>To avoid impacts on persistent above-ground perennial species, focused botanical surveys would be performed during the appropriate bloom period for each of these species (MM BIO-1a and MM BIO-1b). If these species are detected, they would be recorded using a GPS and mapped. Special-status plants identified during protocol-level surveys would be given a no-disturbance buffer of 50 feet within which vegetation treatment activities would not occur unless a qualified biologist determines that the species would benefit from treatment in the occupied habitat area. The size and shape of the generally 50-foot buffer may be adjusted if a qualified RPF or botanist determines that a smaller or larger buffer would be sufficient to avoid impacts on listed plants. If pre-treatment surveys identify species within the same genus of each of these species, these individuals would be treated as potentially special status species and would be offered the same protective buffer for avoidance.</p>				
Environmentally Sensitive Habitat Areas				
<p>SPR BIO-8: Identify and Avoid or Minimize Impacts in Coastal Zone ESHAs. When planning a treatment project within the Coastal Zone, the project proponent will, in consultation with the Coastal Commission or a local government with a certified LCP (as applicable), identify the habitat types and species present to determine if the area qualifies as an Environmentally Sensitive Habitat Area (ESHA). If the area is an ESHA, the treatment project may be allowed pursuant to this PEIR, if it meets the following conditions. If a project requires a CDP by the</p>	<p>Initial Treatment: N Treatment Maintenance: N</p>	N/A	N/A	N/A



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/ MONITORING ENTITY
<p>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> <p><i>Project-Specific Implementation</i></p> <p>To avoid impacts to sensitive natural communities, focused botanical surveys will be performed (MM BIO-1a and MM BIO-1b). If these communities are identified, they will be recorded using a GPS and mapped. No Project-related ground disturbance will occur within 50 feet of these sensitive natural communities (MM BIO-3a).</p>				
Invasive Plants and Wildlife				
<p>SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife. The project proponent will take the following actions to prevent the spread of invasive plants, noxious weeds, and invasive wildlife (e.g., New Zealand mudsnail):</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; 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to, during treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • 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 Cal-IPC (2012 or current version). <p>This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p><i>Project-Specific Implementation</i></p> <p>Broom (<i>G. monspessulana</i>, <i>S. junceum</i>, and <i>C. scoparius</i>) and Italian star thistle (<i>Carduus pycnocephalus</i>) are common invasive plants in the project areas and are classified as noxious weeds by the California Invasive Plant Council. They are aggressive species whose seeds are easily spread by project activities. No species of broom or star thistle should be chip cut; instead, they should be hand-pulled whenever possible. If an individual plant is too large to pull, it will be cut to the base of the plant, and an herbicide will be hand-applied on the stem within 30 minutes of cutting.</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
When working in areas with broom, star thistle, or other invasive plants, crews will ensure that equipment is cleaned of all soil, mud, and debris before departing the site. Whenever possible, crews and equipment will remain on paved, rocked, and well-traveled trails and will avoid cross-country travel. Mud, soil, and organic debris must be removed from equipment, treads, and boots before moving between work sites, with removed soil being left at its original location. Crews can remove soil and vegetative debris by brushing and blowing, followed by water or sanitizing solution, if necessary. If water is used, crews will ensure that no erosion occurs and no waterways are contaminated.				
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. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</p> <p><u>Project-Specific Implementation</u></p> <p>Monarch Butterfly: Because monarch may use habitat in the Project area for large portions of the year, a limited operating period or no-disturbance buffer would not be feasible to avoid impacts on monarchs. Focused noninvasive visual surveys for butterflies would be conducted during the flight season or presence would be assumed. If the presence of monarch butterflies is assumed or the species is detected during focused surveys, MM BIO-2e would be implemented.</p> <p>Western Bumble Bee: Because limited operating periods for special-status bumble bees are not feasible to avoid impacts on Western bumble bee, a focused survey for the species would be conducted prior to implementing treatments in habitat suitable for the species or presence would be assumed. The survey would follow CDFW's</p>	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during treatment and treatment maintenance	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/ MONITORING ENTITY
<p>bumble bee species-specific survey considerations (CDFW 2023b). If special-status bumble bees are detected during focused surveys or assumed to be present in the Project area, MM BIO-2g would be implemented.</p> <p>California Red-Legged Frog: A qualified RPF or qualified biologist would conduct protocol-level surveys for California red-legged frog pursuant to federal guidance (USFWS 2005) within habitat potentially suitable for the species or presence of the species would be assumed, and MM BIO-2a would be implemented. If protocol-level surveys are conducted and California red-legged frogs are not detected within the treatment areas, then no mitigation for the species would be required and avoidance buffers (as required in MM BIO-2a) would not be required. If California red-legged frog is detected or assumed present, MM BIO-2a would be implemented.</p> <p>Western Pond Turtle and California Newt: To avoid impacts on western pond turtle, focused visual encounter surveys for the species and for potentially suitable burrows would be conducted within habitat areas suitable for the species prior to treatment activities within approximately 1,500 feet of aquatic habitat (i.e., streams, ponds). If upland habitat with suitable burrows/nest sites for western pond turtle is detected, the RPF or qualified biologist would inspect the burrow to determine whether it is occupied (e.g., using a burrow scope). If western pond turtle is identified during focused surveys or assumed present, MM BIO-2b for these species would be implemented.</p> <p>Alameda Whipsnake: Within AWS habitat, treatment methods would primarily include manual methods; mechanical equipment would not be operated within AWS habitat. Grazing and prescribed burning would occur in adjacent grasslands which is suitable foraging and dispersal habitat for AWS. No mechanical equipment would be used within 50 feet of scrub habitats, and all mechanical equipment used for the Project will remain on existing roads.</p> <p>Prescribed burning and pile burning would be restricted to when temperatures are conducive to AWS movement, which is typically when soil surface temperatures reach 66°F (19°C) (Hammerson 1979). In habitat suitable for Alameda whipsnake suitable winter retreats (e.g., within native scrub habitat, rock outcrops within approximately 50 feet of scrub habitat), as determined by a qualified RPF or biologist, prescribed burning would not occur between approximately November 1 and March 31 (as determined by a qualified biologist based on temperature and weather conditions) in order to avoid potential disturbance of hibernating Alameda whipsnake.</p> <p>AWS Pre-treatment Survey. CalVTP MM BIO-2a requires that treatments will not be implemented within occupied habitat. This will be achieved by conducting focused surveys to determine presence of AWS immediately prior to work at each new area. If crews are working in suitable core habitat for AWS, a biologist will conduct ongoing pre-treatment focused surveys for the species, adhering to methodologies recommended in USFWS 2011 and Miller and Alvarez 2016. Surveys will be conducted in specified areas immediately prior to vegetation removal to ensure that the species is not present prior to the start of work in each scrub area. Surveys</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>will involve a qualified biologist checking refugia on the ground, branches and brush, and vegetative canopy for AWS that could be present. When dense vegetation inhibits visual survey effectiveness, the biologist will work closely with the crew to cut intermittently a small amount of brush and survey a small area. Surveys will occur constantly immediately ahead of work activities, and if work ceases for up to 1 hour, the area will be re-surveyed prior to returning to work. During this survey effort, the biologist will also advise the crew on avoidance of potential refugia such as burrows and rock piles. AWS focused surveys will occur daily when work is scheduled for areas identified during biological review that could potentially support AWS, such as in suitable scrub/chaparral habitat or oak woodland/grassland adjacent to scrub/chaparral.</p> <p>AWS Avoidance and Minimization Strategy. Alameda whipsnake would generally be assumed present in all scrub communities, adjacent grasslands, adjacent woodlands, and open woodland habitat.</p> <p>Avoidance of mortality or disturbance to individual Alameda whipsnakes would be achieved through the following strategies, which are applicable to manual treatment, mechanical treatment, and prescribed burning:</p> <ul style="list-style-type: none"> • Pre-activity survey: A qualified RPF or biologist would conduct a pre-activity visual clearance survey for Alameda whipsnake immediately prior to manual, mechanical, broadcast burn, and pile burn treatment activities occurring in suitable habitat (scrub habitat, adjacent grassland, and open woodland) each day. • Biological Monitor: A qualified RPF or biologist would monitor all manual and mechanical treatment activities and prescribed burning. The monitor would conduct ongoing surveys ahead of all manual and mechanical work in suitable chaparral and coastal scrub habitat areas. Survey methodology would be adapted from techniques discussed in USFWS 2011 and Miller and Alvarez 2016. <ul style="list-style-type: none"> ○ Surveys would be conducted on an ongoing basis throughout the day ahead of vegetation removal to ensure that the species is not present prior to the start of work. ○ The qualified biological monitor would visually survey refugia on the ground, branches and brush, and vegetative canopy for Alameda whipsnake that could be present. ○ When dense vegetation inhibits visual survey effectiveness, the biologist would work closely with the crew to ensure all cut vegetation is surveyed prior to manual and mechanical removal; the crew and biologist would continuously switch between removing a small amount of vegetation, then surveying the next visible patch of vegetation. ○ If work ceases for up to one hour, the area would be re-surveyed prior to returning to work. If the qualified RPF or biologist deems the area to be highly suitable habitat for Alameda whipsnake, it may be 				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>required that the crew cuts the upper half of the canopy, pauses for survey, and then removes the lower portion of the canopy.</p> <ul style="list-style-type: none"> ○ During this pre-activity visual clearance survey effort, the biologist would advise the crew on avoidance of potential refugia such as burrows and rock piles. • Coverboards shall be installed in key areas, determined by the qualified RFP / biologist prior to vegetation clearing activities within suitable AWS habitat. The coverboards shall be placed to provide refuge for the Alameda whipsnake fleeing the area, including areas where a directional treatment methodology is used. Coverboards shall be inspected at the end of each workday and use by wildlife shall be recorded. • Prior to operating stationary vehicles and equipment, all contractors, their employees, and agency personnel shall check under and near vehicles/equipment for the presence of AWS and any wildlife that may have moved there. If AWS or any wildlife are discovered, the qualified RPF / Biologist will be contacted immediately. The Biologist shall have the authority to halt project activities until the animal leaves the area of its own accord, and shall contact USFWS, as necessary, to determine necessary steps. • Seasonal Restrictions: In habitat suitable for Alameda whipsnake suitable winter retreats (e.g., within native scrub habitat, rock outcrops within approximately 50 feet of scrub habitat), as determined by a qualified RPF or biologist, treatment activities involving prescribed burning, heavy equipment, and ground disturbance would not occur between approximately November 1 and March 31 (as determined by a qualified biologist based on temperature and weather conditions) in order to avoid potential disturbance of hibernating Alameda whipsnake. Manual treatment involving hand crews (i.e., work with hedge trimmers, handheld chainsaws, weed-whippers, etc.), prescribed burning, or mechanical treatment if heavy machinery can be operated without ground disturbance from an existing road or other disturbed area devoid of burrows or rock piles(e.g., use of an articulating arm masticator operated from an existing road or other disturbed, compacted area that contains no burrows or potential hibernaculum may be implemented during hibernating season. • Temperature Restrictions: Mechanical vegetation removal, prescribed burning, and pile burning would be restricted to when temperatures are conducive to Alameda whipsnake movement, which is typically when soil surface temperatures reach 66°F (19°C) (Hammerson 1979). Within areas determined by the qualified RPF or biologist to be suitable Alameda whipsnake habitat, mechanical treatment and prescribed burning would be avoided when temperatures are determined by the qualified RPF or biologist to be too low for Alameda whipsnake movement. Manual treatments may occur in cooler conditions, after the qualified RPF or biologist has thoroughly surveyed the area. 				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • Debris Management: Contractors would immediately (i.e., the same day) process (i.e., remove completely from the treatment area, chip, permanently place within the treatment area for soil stabilization) all cut materials (i.e., brush, stems, slash, logs) as they are produced to avoid attracting Alameda whipsnake to the vegetation piles. If processing within the same day is not feasible, the on-site biologist would advise crews on suitable location(s) outside of suitable scrub and directly adjacent woodland/grassland habitat (e.g., within landings or temporary refuge areas) for temporary storage of cut materials that cannot be processed immediately. • Pile Burning: The following measures apply when work occurs in potential (non-isolated) Alameda whipsnake habitat: <ul style="list-style-type: none"> ○ Check for burrows before building piles. Avoid placing piles on large rodent burrows. ○ Light the pile from one end (generally the uphill side on slopes) to allow AWS to escape, rather than lighting the whole pile at once. ○ Limit material in the pile to 4-inch diameter or less to limit heat penetration into the ground and provide short escape distance. ○ Pile burning will not occur within suitable Alameda whipsnake habitat during the hibernation season (November 1 - March 31). • Habitat function would be maintained for Alameda whipsnake through the following strategies: <ul style="list-style-type: none"> ○ Create Shrub Islands: Vegetation removal in coastal scrub and chaparral habitat would be designed to create shrub islands. This includes all types of coastal scrub and chaparral, including coyote brush scrub. Shrub islands are described based on the USFWS definition of Alameda whipsnake “core” habitat use areas (USFWS 2000). ○ Shrub vegetation patches that are at least 0.5 acre in size, or 0.2 acre in size but within 50 feet of another patch of scrub at least 0.5 acre in size, would be retained. ○ Vegetation removal activities would retain patches of coastal scrub and chaparral in irregular, oblong shapes that maintain a natural looking condition on the landscape by only removing dead vegetation and branches and removing invasive plants. ○ Protection of Refugia Habitat: Rock outcroppings, mammal burrows, and native shrubs within 50 feet of rock outcroppings that are suitable Alameda whipsnake refugia (as determined by the qualified RPF or biologist) would be maintained and protected from vehicles. 				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> ○ Chipped vegetation would not be spread in AWS habitat. ○ Work in AWS core scrub habitat will be restricted to hand tools only and will be restricted to at least one hour after sunrise when soil surface temperatures are 66°F (13°C), and AWS are generally more active. A biologist will advise crews on where to broadcast chips, and chips will not be broadcast within AWS habitat. In addition, AWS surveys will be conducted, and AWS habitat function will be maintained, as described below. ○ If these species are detected during pre-activity surveys or work, the animal will be allowed to leave the area of its own volition. Manual removal of these species is not anticipated during work but permitted biologists with applicable CDFW SCP and/or USFWS 10(a)(1)(A) permits will be on call during work activities to consult with the on-site biologist, as necessary. ○ AWS surveys will be conducted, and AWS habitat function will be maintained, as described below. <p>Maintaining AWS Habitat Function. AWS suitable habitat is described in the USFWS Critical Habitat Designation (USFWS 2006) as comprising three habitat types: core scrub, dispersal/foraging habitat, and rocky outcrop habitat. Dispersal and foraging habitat are defined as woodland or annual grassland contiguous to core scrub habitat. The nature of shaded fuel break work will not change the functionality of dispersal and foraging habitat because large oak woodland trees will be retained, and scrub and grassland habitat will not be heavily targeted for treatment.</p> <p>Core scrub habitat is described as shrub communities with a mosaic of open and closed canopy patches. USFWS defines scrub as coastal scrub, coyote brush scrub, or maritime chaparral areas (or “scrub”) greater than 0.5 acre in size, or scrub areas greater than 0.2 acre in size that are within 50 feet of scrub patches greater than 0.5 acre in size (USFWS 2006). When work is occurring within core scrub habitat areas, the crew will work closely with the biologist to remove scrub selectively in a way that retains these dimensions and therefore the overall habitat function while still serving the needs of the shaded fuel break. This technique has been used on previous projects and aims to provide a “scrub mosaic” that retains AWS habitat function. Scrub mosaic recommendations may vary depending on site conditions. The following techniques will be implemented during treatment:</p> <ul style="list-style-type: none"> • Vegetation removal will occur in irregular, oblong shapes to maintain a natural condition. • Vegetation removal will avoid rocky outcrops. • The overall dominant habitat type will not be converted. 				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> Vegetation removal will concentrate on dead, woody vegetation and branches and removing invasive plants. <p>Preliminary and post-treatment surveys will be conducted that will assess the condition and acreage of AWS core scrub habitat. Post-treatment conditions will be assessed to ensure that there is no overall loss of habitat function within AWS core scrub.</p> <p>It should be noted that scrub and chaparral are transitional habitat types and over time, canopy in these areas grows taller and denser, and larger tree species such as oak and madrone are naturally recruited and become increasingly dominant. Without any intervention over time, chaparral and scrub communities will natural be converted to woodland and forested habitat. Thoughtful treatment of select areas that retains scrub islands suitable for AWS core scrub is expected to be more effective than complete inaction in these areas.</p> <p><i>Nesting Birds, including Golden Eagle and American Peregrine Falcon:</i> If avoiding nesting birds through working outside of nesting season is determined to be infeasible, impacts on special-status birds (i.e., American peregrine falcon, golden eagle) would be addressed through focused surveys (i.e., nest searches) for nests of these species would be conducted prior to implementing treatment activities during the nesting bird season (February 1–August 31). If active special-status bird nests are observed during focused surveys, then MM BIO-2a would be implemented.</p> <p><i>Pallid Bat and Townsend’s Big-Eared Bat:</i> If project implementation would not feasibly avoid breeding season for special-status bats, impacts on special-status bats (i.e., pallid bat, Townsend’s big-eared bat, western mastiff bat, western red bat) would be addressed through focused surveys for maternity roosts of these species would be conducted prior to implementing manual, mechanical, and prescribed burning treatment activities during the bat maternity season (April 1–August 31). If special-status bat roosts are identified during focused surveys, MM BIO-2b for special-status bats would be implemented.</p> <p><i>San Francisco Dusky-Footed Woodrat:</i> To avoid impacts on San Francisco Dusky-Footed Woodrat, a focused survey for the species nest sites would be conducted prior to implementing treatments within suitable habitat for this species (e.g., oak and riparian woodlands with well-developed understory, chaparral scrub). If woodrat nests are detected during surveys, MM BIO-2b would be implemented.</p> <p><i>American Badger:</i> To avoid impacts on American badgers, a focused survey for the species and for potential dens would be conducted prior to implementing treatments in habitat suitable for the species (i.e., grassland, open woodland). If American badger dens are detected during focused surveys, MM BIO-2b would be implemented.</p> <p>If the limited operating period for special-status bats is determined to be infeasible, to avoid impacts on special-status bats (i.e., pallid bat, Townsend’s big-eared bat, western mastiff bat, western red bat), focused surveys for</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
maternity roosts of these species will be conducted prior to implementing manual, mechanical, and prescribed burning treatment activities during the bat maternity season (April 1–August 31). If special-status bat roosts are identified during focused surveys, MM BIO-2b for special-status bats 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. • 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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to and during treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD</p>
<p>SPR BIO-12. Protect Common Nesting Birds, Including Raptors. The project proponent will schedule treatment activities to avoid the active nesting season of common native bird species, including raptors, that could be present within or adjacent to the treatment site, if feasible. Common native birds are species not otherwise treated as special status in the CalVTP PEIR. The active nesting season will be defined by the qualified RPF or biologist.</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</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to and during treatment and treatment maintenance</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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 location of which will be determined by a qualified RPF or biologist. Factors to be considered for determining buffer location will include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and expected treatment activities. Nests of common birds within the buffer need not be monitored during treatment. However, buffers will be maintained until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. • Modify Treatment. The project proponent will modify the treatment in the vicinity of an active nest to avoid disturbance of active nests (e.g., by implementing manual treatment methods, rather than mechanical treatment methods). Treatment modifications will be determined by the project proponent in coordination with the qualified RPF or biologist. • Defer Treatment. The project proponent will defer the timing of treatment in the portion(s) of the treatment site that could disturb the active nest. If this avoidance strategy is implemented, treatment activity will not commence until young fledge or the nest becomes inactive, as determined by the qualified RPF, biologist, or biological technician. <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</p>				



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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>				
Geology, Soils, 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><i>Project-Specific Implementation</i></p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>To prevent herbicides from being mobilized and soil from being compacted, which increases runoff and erosion risk, the project proponent will suspend mechanical and herbicide treatments if: (1) it is raining, (2) soils are saturated, and/or (3) soils are wet enough to mobilize herbicides or be compacted by mechanical activities. The project proponent will be prepared to completely suspend mechanical and herbicide treatment activities prior to the initiation of the rain event. Activities that cause mechanical soil disturbance may resume when precipitation stops and soils are no longer very wet or saturated (i.e., when soil and/or surface material pore spaces are filled with water to such an extent that runoff is likely to occur). Indicators of very wet or saturated soil conditions may include but are not limited to: (1) areas of ponded water, (2) pumping of fines from the soil or road surfacing, (3) loss of bearing strength resulting in the deflection of soil or road surfaces under a load, such as the creation of wheel ruts, (4) spinning or churning of wheels or tracks that produces a wet slurry, (5) inadequate traction without blading wet soil or surfacing materials, or (6) tire track imprints or hoof marks in the soil. This SPR applies only to mechanical and herbicide treatment activities and all treatment types, including treatment maintenance.</p>				
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>
<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 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</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
prescribed burns that result in exposure of bare soil over 50 percent of the Project area treatment activities and all treatment types, including treatment maintenance.				
SPR GEO-4 Erosion Monitoring: The project proponent will inspect treatment areas for the proper implementation of erosion control SPRs and mitigations prior to the rainy season. If erosion control measures are not properly implemented, they will be remediated prior to the first rainfall event per SPR GEO-3 and GEO-8. Additionally, the project proponent will inspect for evidence of erosion after the first large storm or rainfall event (i.e., ≥ 1.5 inches in 24 hours) as soon as is feasible after the event. Any area of erosion that will result in substantial sediment discharge will be remediated within 48 hours per the methods stated in SPRs GEO-3 and GEO-8. This SPR applies only to mechanical, prescribed herbivory, and prescribed burning treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During, after	MOFD	MOFD
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 (CAL FIRE 2019). Where waterbreaks cannot effectively disperse surface runoff, including where waterbreaks cause surface run-off to be concentrated on downslopes, other erosion controls will be installed as needed to maintain site productivity by minimizing soil loss. This SPR applies only to mechanical, manual, and prescribed burn treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During	MOFD	MOFD
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, Hubbert, and Moghaddas 2014). The project proponent will not locate burn piles in a Watercourse and Lake Protection Zone as defined in SPR HYD-4. This SPR applies to mechanical, manual, and prescribed burning treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During	MOFD	MOFD
SPR GEO-7 Minimize Erosion: To minimize erosion, the project proponent will: (1) Prohibit use of heavy equipment where any of the following conditions are present: (i) Slopes steeper than 65 percent. (ii) Slopes steeper than 50 percent where the erosion hazard rating is high or extreme.	Initial Treatment: Y Treatment Maintenance: Y	During	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	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: 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>	<p>Initial Treatment: N Treatment Maintenance: N</p>	N/A	N/A	N/A
Greenhouse Gas Emissions Standard Project Requirements				
<p>SPR GHG-1 Contribute to the AB 1504 Carbon Inventory Process: The project proponent of treatment projects subject to the AB 1504 process will provide all necessary data about the treatment that is needed by the U.S. Forest Service and FRAP to fulfill requirements of the AB 1504 carbon inventory, and to aid in the ongoing research about the long-term net change in carbon sequestration resulting from treatment activity. This SPR applies to all treatment activities and all treatment types, including treatment maintenance.</p>	<p>Initial Treatment: N Treatment Maintenance: N</p>	N/A	N/A	N/A
Hazardous Material and Public Health and Safety Standard Project Requirements				
<p>SPR HAZ-1 Maintain All Equipment: The project proponent will maintain all diesel- and gasoline-powered equipment per manufacturer’s specifications, and in compliance with all state and federal emissions requirements. Maintenance records will be available for verification. Prior to the start of treatment activities, the</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior, during, after</p>	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
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.				
SPR HAZ-2 Require Spark Arrestors: The project proponent will require mechanized hand tools to have federal- or state-approved spark arrestors. This SPR applies only to manual treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During	MOFD	MOFD
SPR HAZ-3 Require Fire Extinguishers: The project proponent will require tree cutting crews to carry one fire extinguisher per chainsaw. Each vehicle would be equipped with one long-handled shovel and one axe or Pulaski consistent with PRC Section 4428. This SPR applies only to manual treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During	MOFD	MOFD
SPR HAZ-4 Prohibit Smoking in Vegetated Areas: The project proponent will require that smoking is only permitted in designated smoking areas barren or cleared to mineral soil at least 3 feet in diameter (PRC Section 4423.4). This SPR applies to all treatment activities and treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	During	MOFD	MOFD
SPR HAZ-5 Spill Prevention and Response Plan: The project proponent or licensed Pest Control Advisor will prepare a Spill Prevention and Response Plan 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 Spill Prevention and Response Plan will include (but not be limited to): <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 to be maintained throughout the life of the activity; • Procedures for the proper storage, use, and disposal of any herbicides, adjuvants, or other chemicals used in vegetation treatment. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance. <i>Project-Specific Implementation</i> Herbicide application will not occur within protective buffers for special-status plants to prevent drift and non-target application.	Initial Treatment: Y Treatment Maintenance: Y	Prior	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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 Pest Control Advisor. • 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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior, during</p>	<p>MOFD</p>	<p>MOFD</p>
<p>SPR HAZ-7 Triple Rinse Herbicide Containers: The project proponent will triple rinse all herbicide and adjuvant containers with clean water at an approved site, and dispose of rinsate by placing it in the batch tank for application per 3 CCR Section 6684. The project proponent will puncture used containers on the top and bottom to render them unusable, unless said containers are part of a manufacturer’s container recycling program, in which case the manufacturer’s instructions will be followed. Disposal of non-recyclable containers will be at legal dumpsites. Equipment will not be cleaned, and personnel will not be washed in a manner that would allow contaminated water to directly enter any body of water within the treatment area or adjacent watersheds. Disposal of all herbicides will follow label requirements and waste disposal regulations.</p> <p>This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>
<p>SPR HAZ-8 Minimize Herbicide Drift to Public Areas: The project proponent will employ the following herbicide application parameters during herbicide application to minimize drift into public areas:</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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.				
SPR HAZ-9 Notification of Herbicide Use in the Vicinity of Public Areas: For herbicide applications occurring within or adjacent to public recreation areas, residential areas, schools, or any other public areas within 500 feet, the project proponent will post signs at each end of herbicide treatment areas and any intersecting trails notifying the public of the use of herbicides. The signs will include the signal word (i.e., Danger, Warning or Caution), product name, and manufacturer; active ingredient; EPA registration number; target pest; treatment location; date and time of application; restricted entry interval, if applicable per the label requirements; date which notification sign may be removed; and a contact person with a telephone number. Signs will be posted prior to the start of treatment and notification will remain in place for at least 72 hours after treatment ceases. This SPR applies only to herbicide treatment activities and all treatment types, including treatment maintenance.	Initial Treatment: Y Treatment Maintenance: Y	Prior to and during	MOFD	MOFD
Hydrology and Water Quality Standard Project Requirements				
SPR HYD-1 Comply with Water Quality Regulations: Project proponents must also conduct proposed vegetation treatments in conformance with appropriate RWQCB timber, vegetation, and land disturbance-related Waste Discharge Requirements (WDRs) and/or related Conditional Waivers of Waste Discharge Requirements (Waivers), and appropriate Basin Plan Prohibitions. Where these regulatory requirements differ, the most restrictive will apply. If applicable, this includes compliance with the conditions of general WDRs and WDR waivers for timber or silviculture activities where these waivers are designed to apply to non-commercial fuel reduction and forest health projects. In general, WDRs and Waivers of WDRs 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. <i>Project-Specific Implementation</i> 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	Initial Treatment: Y Treatment Maintenance: Y	Prior and during	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>prepare a 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>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><i>Project-Specific Implementation</i></p> <p>No new roads will be created as part of Project implementation.</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</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. • 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>This SPR applies to prescribed herbivory treatment activities and all treatment types, including treatment maintenance.</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>
<p>SPR HYD-4 Identify and Protect Watercourse and Lake Protection Zones: The project proponent will establish 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 (CAL FIRE 2019). 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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS					APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
Procedures for Determining WLPZ Widths								
Water Class	Class I	Class II	Class III	Class IV				
Water Class Characteristics or Key Indicator Beneficial Use	1) Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2) Fish always or seasonally present onsite, includes habitat to sustain fish migration and spawning.	1) Fish always or seasonally present offsite within 1,000 feet downstream and/or 2) Aquatic habitat for non-fish aquatic species. 3) Excludes Class III waters that are tributary to Class I waters.	No aquatic life present, watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high-water flow conditions after completion of timber operations.	Man-made watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use.				
WLPZ Width (ft) – Distance from top of bank to the edge of WLPZ								
< 30 % Slope	75	50	Sufficient to prevent the degradation of downstream beneficial uses of water. Determined on a site-specific basis.					
30-50 % Slope	100	75						
> 50 % Slope	150	100						
<p><i>Source: 14 CCR Section 916.5 [936.5, 956.5] (February 2019 version)</i></p> <p>The following WLPZ protections will be applied for all treatments:</p> <ul style="list-style-type: none"> Treatment activities with WLPZs will retain at least 75 percent surface cover and undisturbed area to act as a filter strip for raindrop energy dissipation and for wildlife habitat. If this percentage is reduced a qualified RPF will provide the project proponent with a site- and/or treatment activity-specific explanation for the percent surface cover reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced percent as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). This requirement is based on 14 CCR Section 916.4 [936.4, 956.4] Subsection (b)(6) (February 2019 version) and 14 CCR Section 916.5 (February 2019 version). Equipment, including tractors and vehicles, must not be driven in wet areas or WLPZs, except over existing roads or watercourse crossings where vehicle tires or tracks remain dry. 								



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • 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, riprap, 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>				
<p>SPR HYD-5 Protect Non-Target Vegetation and Special-status Species from Herbicides: 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 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>reaching non-target vegetation or a waterway.</p> <ul style="list-style-type: none"> • 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>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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During</p>	<p>MOFD</p>	<p>MOFD</p>



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	Prior	MOFD	MOFD
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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	Prior	MOFD	MOFD
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 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 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.</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	Prior, during	MOFD	MOFD



STANDARD PROJECT REQUIREMENTS	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>If the TMP identifies impacts on transportation facilities outside of the jurisdiction of the project proponent, the TMP will be submitted to the agency with jurisdiction over the affected roadways prior to commencement of vegetation treatment projects. This SPR applies to all treatment activities and treatment types, including treatment maintenance.</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, which will include measures to monitor smoke dispersion onto public roadways, and traffic control operations that 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. 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>Initial Treatment: Y Treatment Maintenance: N</p>	<p>Prior</p>	<p>MOFD</p>	<p>MOFD</p>



Mitigation Measures

MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/ MONITORING ENTITY
Aesthetics and Visual Resources				
<p>MM AES-3: Conduct Visual Reconnaissance for Non-Shaded Fuel Breaks and Relocate or Feather and Screen Publicly Visible Non-Shaded Fuel Breaks</p> <p>The project proponent will conduct a visual reconnaissance of the treatment area prior to implementing non-shaded fuel breaks to observe the surrounding landscape and determine if public viewing locations, including scenic vistas, public trails, and state scenic highways, have views of the proposed treatment area. If none are identified, the non-shaded fuel break may be implemented without additional visual mitigation.</p> <p>If the project proponent identifies public viewing points, including heavily used scenic vistas, public trails, recreation areas, and state scenic highways with lengthy views (i.e., longer than a few seconds) of a proposed non-shaded fuel break treatment area, the project proponent will, prior to implementation, attempt to identify any feasible change in location of the fuel break to reduce its visibility from public viewpoints. If no feasible location changes exist that would reduce impacts to public viewers and achieve the intended wildfire risk reduction objectives of the proposed non-shaded fuel break, the project proponent will implement, where feasible, a shaded fuel break rather than a non-shaded fuel break, if the shaded fuel break would achieve the intended wildfire risk reduction objectives. With the shaded fuel break, the project proponent will thin and feather adjacent vegetation to break up the linear edges of the fuel break and strategically preserve vegetation at the edge of the fuel break, as feasible, to help screen public views and minimize the contrast between the fuel break and surrounding vegetation.</p>	<p>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
Air Quality				
<p>MM 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 	<p>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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.</p> <ul style="list-style-type: none"> • 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. • Off-road equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NO_x and PM. 				
Archaeological, Historical, and Tribal Cultural Resources				
<p>MM 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</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>During and after</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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>				
Biological Resources				
<p>MM 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 (referred to by CAL FIRE as a Completion Report) with a science-based justification for the deviation. No fire ignition (nor use of associated accelerants) will occur within 50 feet of listed plants.</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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 MM 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>MM 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 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior to and during treatment</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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.</p> <ul style="list-style-type: none"> • Treatments will be designed to maintain the function of special-status plant habitat. For example, for a fuel break proposed in treatment areas occupied by special-status plants, if the removal of shade cover would degrade the special-status plant habitat despite the requirement to physically or seasonally avoid the special-status plant itself, habitat function would be diminished, and the treatment would need to be modified or precluded from implementation. • No fire ignition (nor use of associated accelerants) will occur within the special-status plant buffer. <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 MM 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>				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p><i>Project-Specific Implementation</i></p> <p>If special-status plant species are detected during protocol-level surveys, a no-disturbance buffer of at least 50 feet would be established around the area occupied by the species within which treatments would not occur.</p> <p>If special-status plant species are detected during protocol-level surveys, an evaluation of the appropriate treatment design and frequency to maintain habitat function within habitat suitable for special-status plants would be carried out by a qualified RPF, biologist, or botanist. Therefore, habitat function for special-status plants would be maintained because treatment activities and maintenance treatments would be designed to ensure that treatments, including follow-up maintenance, maintain habitat function for the special-status plant species present.</p>				
<p>MM 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 MMs BIO-1a and 1b, the project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant impacts that require compensatory mitigation and describes the compensatory mitigation strategy being implemented and how unavoidable losses of special-status plants will be compensated. The project proponent will consult with CDFW and/or any other applicable responsible agency prior to finalizing the Compensatory Mitigation Plan to satisfy that responsible agency's requirements (e.g., permits, approvals) within the plan. If the special-status plant taxa are listed under ESA or CESA, the plan will be submitted to CDFW and/or USFWS (as appropriate) for review and comment.</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>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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: <ul style="list-style-type: none"> ○ 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> <p>If mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site 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>				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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 PEIR.</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>MM 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. <ul style="list-style-type: none"> • 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 MM BIO-2c. • Injury or mortality of California Fully Protected Species is prohibited pursuant to Sections 3511, 4700, 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>5050, and 5515 of the California Fish and Game Code and will be avoided.</p> <p><u>Maintain Habitat Function</u></p> <p>The project proponent will design treatment activities to maintain the habitat function, by implementing the following:</p> <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. • A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. Because this measure pertains to species listed under CESA or ESA or are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS/NOAA Fisheries regarding the determination that habitat function is maintained. If consultation determines that the treatment will not maintain habitat function for the special-status species, the project proponent will implement MM BIO-2c. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p><i>Project-Specific Implementation</i></p> <p>If California Fully Protected Species or species listed under ESA or CESA are observed during focused or protocol-level surveys (conducted pursuant to SPR BIO-10) or assumed present, the project proponent would avoid adverse effects to the species by implementing the following:</p> <p><u>Special-Status Reptiles and Amphibians</u> The following additional measures apply to a variety of sensitive reptiles and amphibians with potential to occur in the Project area.</p> <ul style="list-style-type: none"> All contractors, their employees, and agency personnel involved in the implementation of the project would check for the presence of Alameda whipsnake, California red-legged frog, California newt, Western pond turtle, or other sensitive wildlife under or next to stationary vehicles prior to operating their vehicles. If a special-status reptile or amphibian is found, the qualified RPF or biologist would determine necessary next steps to avoid impact. If pile burning is implemented, piles would be placed away from mammal burrows, rock outcrops, or scrub habitat that could serve as refugia for Alameda whipsnake, California newt, western pond turtle, or California red-legged frog. Within AWS habitat, prescribed burning and pile burning would be restricted to when temperatures are conducive to Alameda whipsnake movement, which is typically when soil surface temperatures reach 66°F (19°C) (Hammerson 1979). Burn piles would be burned gradually and lit from one end (the uphill side on slopes) to allow animals that may be using the pile for refuge to escape. When feasible, a single pile would be ignited, and all other piles in the vicinity of the burning pile would be carried to the burning pile and burned in the same location as the initial burn pile. When feasible, this strategy would minimize risk to wildlife using piles for refuge. Burn piles would not be placed on mammal burrows which occur in oak woodland, grassland, or savannah within suitable upland, breeding, core, dispersal, or foraging habitat for Alameda whipsnake, California red-legged frog, California newt, or Western pond turtle. Whenever feasible in forested environments adjacent to scrublands (for AWS and CRLF) or in oak woodland or grasslands (for California newt, Western pond turtle, and CRLF), understory vegetation would be removed first, followed by trees, to facilitate visibility of sensitive reptiles and amphibians by a qualified RPF or biologist. Heavy equipment would occur exclusively from compacted surfaces such as established roads and trails. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> Understory Vegetation Treated First: Whenever feasible in forested environments adjacent to scrublands (for AWS and California red-legged frog) or in oak woodland or grasslands (for California newt, Western pond turtle, and California red-legged frog), understory vegetation would be removed first, followed by trees, to facilitate visibility of sensitive reptiles and amphibians by a qualified RPF or biologist. <p><u>Protection of Burrows and Refugia Habitat</u></p> <ul style="list-style-type: none"> Heavy equipment including front-loaded mastication equipment which may collapse burrows would occur exclusively from compacted surfaces such as established roads and trails. Burn piles would not be placed on mammal burrows which occur in oak woodland, grassland, or savannah within suitable upland, breeding, core, dispersal, or foraging habitat for AWS, California red-legged frog, California newt, or western pond turtle. <p><u>Alameda Whipsnake</u></p> <p>Alameda whipsnake would generally be assumed present in all scrub communities, adjacent grasslands, adjacent woodlands, and open woodland habitat.</p> <p>Avoidance of mortality or disturbance to individual AWSs would be achieved through the following strategies, which are applicable to manual treatment, mechanical treatment, and prescribed burning:</p> <ul style="list-style-type: none"> Pre-activity survey: A qualified RPF or biologist would conduct a pre-activity visual clearance survey for AWS immediately prior to manual, mechanical, broadcast burn, and pile burn treatment activities occurring in suitable habitat (scrub habitat, adjacent grassland, and open woodland) each day. Biological monitor: A qualified RPF or biologist would monitor all manual and mechanical treatment activities and prescribed burning. The monitor would conduct ongoing surveys ahead of all manual and mechanical work in suitable chaparral and coastal scrub habitat areas. Survey methodology would be adapted from techniques discussed in USFWS 2011 and Miller and Alvarez 2016. Surveys would be conducted on an ongoing basis throughout the day ahead of vegetation removal to ensure that the species is not present prior to the start of work. The qualified biological monitor would visually survey refugia on the ground, branches and brush, and vegetative canopy for AWS that could be present. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • When dense vegetation inhibits visual survey effectiveness, the biologist would work closely with the crew to ensure all vegetation is surveyed prior to removal; the crew and biologist would continuously switch between removing a small amount of vegetation, then surveying the next visible patch of vegetation. • If work ceases for up to one hour, the area would be re-surveyed prior to returning to work. If the qualified RPF or biologist deems the area to be highly suitable habitat for AWS, they may require that the crew cuts the upper half of the canopy, pauses for survey, and then removes the lower portion of the canopy. • During this pre-activity visual clearance survey effort, the biologist would advise the crew on avoidance of potential refugia such as burrows and rock piles. Coverboards shall be installed in key areas, determined by the qualified RFP / biologist prior to vegetation clearing activities within suitable AWS habitat. The coverboards shall be placed to provide refuge for the Alameda whipsnake fleeing the area, including areas where a directional treatment methodology is used. Coverboards shall be inspected at the end of each workday and use by wildlife shall be recorded. • Prior to operating stationary vehicles and equipment, all contractors, their employees, and agency personnel shall check under and near vehicles/equipment for the presence of AWS and any wildlife that may have moved there. If AWS or any wildlife are discovered, the qualified RPF / Biologist will be contacted immediately. The Biologist shall have the authority to halt project activities until the animal leaves the area of its own accord, and shall contact USFWS, as necessary, to determine necessary steps. • Seasonal Restrictions: In habitat suitable for Alameda whipsnake suitable winter retreats (e.g., within native scrub habitat, rock outcrops within approximately 50 feet of scrub habitat), as determined by a qualified RPF or biologist, prescribed burning would not occur between approximately November 1 and March 31 (as determined by a qualified biologist based on temperature and weather conditions) in order to avoid potential disturbance of hibernating Alameda whipsnake. Manual treatment involving hand crews (i.e., work with hedge trimmers, handheld chainsaws, weed-whippers, etc.), prescribed burning, or mechanical treatment if heavy machinery can be operated without ground disturbance from an existing road or other disturbed area devoid of burrows or rock piles (e.g., use of an articulating arm masticator operated from an existing road or other disturbed, compacted area that contains no burrows or potential hibernaculum) may be implemented during hibernating season. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • Temperature Restrictions: Road-based mechanical vegetation removal, prescribed burning and pile burning would be restricted to when temperatures are conducive to Alameda whipsnake movement, which is typically when soil surface temperatures reach 66°F (19°C) (Hammerson 1979). Within areas determined by the qualified RPF or biologist to be suitable Alameda whipsnake habitat, mechanical treatment and prescribed burning would be avoided when temperatures are determined by the qualified RPF or biologist to be too low for Alameda whipsnake movement. Manual treatments may occur in cooler conditions, after the qualified RPF or biologist has thoroughly surveyed the area. • Debris Management: Contractors would immediately (i.e., the same day) process (i.e., remove completely from the treatment area, chip, permanently place within the treatment area for soil stabilization) all cut materials (i.e., brush, stems, slash, logs) as they are produced to avoid attracting AWS to the vegetation piles. If processing within the same day is not feasible, the on-site biologist would advise crews on suitable location(s) outside of suitable scrub and directly adjacent woodland/grassland habitat (e.g., within landings or temporary refuge areas) for temporary storage of cut materials that cannot be processed immediately. • Pile Burning: The following measures apply when work occurs in potential (non-isolated) Alameda whipsnake habitat: <ul style="list-style-type: none"> • Check for burrows before building piles. Avoid placing piles on large rodent burrows. • Light the pile from one end (generally the uphill side on slopes) to allow AWS to escape, rather than lighting the whole pile at once. • Limit material in the pile to 4-inch diameter or less to limit heat penetration into the ground and provide short escape distance. • Pile burning will not occur within suitable Alameda whipsnake habitat during the hibernation season (November 1-March 31). • Habitat function would be maintained for AWS. AWS suitable habitat is described in the USFWS Critical Habitat Designation (USFWS 2006) as comprising three habitat types: core scrub, dispersal/foraging habitat, and rocky outcrop habitat. Dispersal and foraging habitat are defined as woodland or annual grassland contiguous to core scrub habitat. The nature of shaded fuel break work will not change the functionality of dispersal and foraging habitat because large oak woodland trees will be retained, and scrub and grassland habitat will not be heavily targeted for treatment. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • Protection of Refugia Habitat: Rock outcroppings, mammal burrows, and native shrubs within 50 feet of rock outcroppings that are suitable Alameda whipsnake refugia (as determined by the qualified RPF or biologist) would be maintained and protected from vehicles. • Chipped vegetation would not be spread in AWS habitat. • Work in AWS core scrub habitat will be restricted to hand tools only and will be restricted to at least one hour after sunrise when soil surface temperatures are 66°F (13°C), and AWS are generally more active. A biologist will advise crews on where to broadcast chips, and chips will not be broadcast within AWS habitat. In addition, AWS surveys will be conducted, and AWS habitat function will be maintained, as described below. • If these species are detected during pre-activity surveys or work, the animal will be allowed to leave the area of its own volition. Manual removal of these species is not anticipated during work but permitted biologists with applicable CDFW SCP and/or USFWS 10(a)(1)(A) permits will be on call during work activities to consult with the on-site biologist, as necessary. <p><u>California Red-Legged Frog, California Newt, and Western Pond Turtle</u></p> <p>If California red-legged frog, California newt, and Western pond turtle are assumed present or detected during protocol-level surveys, the following measures would be implemented:</p> <ul style="list-style-type: none"> • Mechanized operations would be shut down when the precipitation threshold is met, and the shutdown period would begin once the precipitation event has ended. <p>California Red-Legged Frog</p> <ul style="list-style-type: none"> • During the dispersal season from October 15 (or after the first rainfall of the year) through April 15, pre-treatment visual surveys would be performed daily by a qualified RPF, biologist, or biological monitor, prior to implementation of any treatment activities (i.e., mechanical, manual, and herbicide) within breeding, upland, or dispersal habitat as determined by a qualified biologist. If a California red-legged frog is found during pre-activity surveys or enters the Project site during treatment activities, all work would stop within a non-disturbance buffer of 100 feet around the individual unless the qualified RPF or biologist determines that a different sized buffer is appropriate to avoid disturbance, injury, or mortality. Treatment activities would cease within the buffer until the animal leaves on its own and the occurrence would be reported to the qualified RPF or biologist and USFWS. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • If California red-legged frog is found during pre-activity surveys, which would be conducted by a qualified RPF or biologist, or enters the Project site during treatment activities, the specific habitat features (i.e., log, tree, debris pile) used by the frog when detected would be evaluated by a qualified RPF or biologist for habitat retention, if habitat retention is achievable while meeting the project goals. • All herbicide use during project implementation would 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 EPA by the Center for Biological Diversity. For example, to comply with the injunction, only cut stump and basal bark applications would be allowed in California red-legged frog habitat under the following conditions. • Cut stump and basal bark applications may be used but would 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 would be evaluated for the presence of California red-legged frog by a qualified biologist, qualified professional, RPF, RPF supervised designee, or a contractor who has been through the environmental awareness training. <p><u>Golden Eagle, American Peregrine Falcon, and other Special-Status Birds</u></p> <ul style="list-style-type: none"> • If active special-status bird nests are detected during focused surveys, a no-disturbance buffer of at least 8 acres would be established around active nests for golden eagle, 10 acres for American peregrine falcon, and at least 100 feet around the active nests of other special-status birds, and no treatment activities would occur within this buffer until the chicks have fledged, or the nest is otherwise no longer active, as determined by a qualified RPF or biologist. • Additionally, trees containing golden eagle nests would not be removed pursuant to the Bald and Golden Eagle Protection Act. <p><i>Special-Status Bats: Pallid Bat and Townsend's Big-Eared Bat</i></p> <p>Bats may be excluded from roosting structures in the work area only during the periods from mid-February until mid-April, and from late August until mid-October to avoid hibernation and maternity season. Bat elimination must include the combination of two actions: careful blockage of all openings that are large enough to allow bats to enter, and installation of one-way valves placed on the actively used openings to allow the bats to fly outside as they normally would but not to re-enter. After 7-10 days, the one-way valves are removed, and the remaining openings are blocked or sealed. Note that bats show a strong propensity to use</p>				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>any available openings to reclaim access to the roost when excluded, and blockages must be performed with great thoroughness and attention to detail. Bat exclusions must be overseen by a qualified bat biologist.</p> <p>Crew members and contractors would be trained to identify and avoid bat roosts if encountered (SPR BIO-2), and a biological monitor will be present on site to provide guidance, as needed. If identified, active maternity or night roosts would be protected with an avoidance buffer (SPR AD-2). A Spill Prevention and Response Plan (SPR HAZ-5) will be developed as part of project implementation, and the Project proponent will comply with herbicide application regulations (SPR HAZ-6) and restrict use of herbicide to avoid native plants that could impact insects which are bat prey base.</p> <p>MM BIO-2a, BIO-2b, BIO-3a, and BIO-4 would be implemented, including avoidance of protected aquatic features, targeting removal of non-native vegetation, removing strategic native vegetation to retain habitat function and prevent type conversion, and restricting treatment activities to non-nesting season as possible avoid impacts bats and their insect prey base. If special-status bat roosts are identified during focused surveys, a no-disturbance buffer of 250 feet would be established around active pallid bat, Townsend’s big-eared bat, and other special status bat roosts and mechanical treatments, manual treatments, and broadcast and pile burning would not occur within this buffer.</p> <p><i>San Francisco Dusky-Footed Woodrat</i></p> <ul style="list-style-type: none"> • Pre-treatment surveys would be combined with a focused survey (SPR BIO-1, SPR BIO-3, SPR BIO-10) to identify nest sites within the Project footprint. SFDFW nests will be avoided entirely where possible. Nests that cannot be avoided by work will be given a 1-meter buffer to include surrounding vegetation, encompassing canopy above the nest. Nests that are deemed hazardous, such as those creating ladder fuels, may be dismantled under the supervision of a qualified biologist using a phased approach that allows woodrats to disperse safely. • Crews will be trained before the start of work to recognize woodrat nests and follow proper avoidance protocol (SPR BIO-2). If previously unknown nests are uncovered during work, crews will consult a biologist. Biologists will flag woodrat nest avoidance buffers during the pre-activity surveys (SPR AD-2). • To protect both aquatic and upland habitat, a Spill Prevention and Response Plan (SPR HAZ-5) will be developed as part of project implementation. The Project proponent will comply with water quality regulations (SPR HYD-1); will adhere to water quality protection measures when conducting prescribed herbivory (SPR HYD-3), herbicide application regulations (SPR HAZ-6), and restrict use of 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>herbicide to avoid native plants; and will reduce the potential for impacts to habitat occupied by this species.</p> <ul style="list-style-type: none"> MMs BIO-2a, BIO-2b, BIO-3a, and BIO-4 would be implemented including avoiding suitable habitat such as riparian, wetland, and aquatic habitat by with a minimum 50-foot buffer; providing a qualified biologist during treatment activities to provide avoidance advice during an encounter; and avoiding vegetation treatment within occupied habitat or conducting vegetation treatment outside the sensitive period in these species' life cycle. This scenario would be accomplished by avoiding all aquatic habitat identified during focused surveys prior to work. MM BIO-2b requires biological monitoring during treatment activities within or adjacent to sensitive habitat areas (e.g., streams, ponds, etc.), flagging areas for avoidance, and establishing no work-buffers. If a San Francisco Dusky-Footed Woodrat nest is identified during focused surveys, a minimum 10-foot no-disturbance buffer would be established around the nest which would be assumed to be occupied. The size of the buffer would be determined by the qualified RPF or biologist, and no treatment activities would occur within this buffer. If any individual of this species is detected during pre-activity surveys or work, the animal will be allowed to leave the area of its own volition. <p>Per CDFW recommendations the following additional measures would be implemented to further reduce impacts to woodrats:</p> <ul style="list-style-type: none"> Prior to any nest removal, safety measures should be employed to minimize potential human exposure to possible diseases carried by woodrats. Adequate protection, such as protective clothing, equipment and tools, gloves, and appropriate masks, to ensure safety regarding viruses and diseases potentially carried by rodents, is recommended. Vegetation immediately surrounding each nest to be removed will be cleared without disturbing the nest, to prevent displaced woodrats from taking cover in dense vegetation within the work area. All vegetation will be hauled off site immediately. No brush piles or dense understory vegetation that could be used for cover by woodrats will be retained in the nest removal area after the nest is removed. Nest removal efforts should not take place during inclement or extreme weather conditions and should take place at dusk or dawn when woodrats are least susceptible to predators. Each nest should be carefully dismantled using hand tools (e.g., a rake and pitchfork). 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> If a litter of young is found or suspected, the nest material will be replaced and the nest left alone for 2 to 3 weeks; after this time, the nest will be rechecked to verify that the young are capable of independent survival before proceeding with nest dismantling. <p>American Badger</p> <ul style="list-style-type: none"> SPR GEO-1 would suspend treatment activities during heavy precipitation until soils are no longer saturated, would reduce the potential for Project activities to disturb burrows occupied by American badger and would reduce potential for impacts to this species. Pre-treatment surveys would be combined with a focused survey (SPR BIO-1, SPR BIO-3, SPR BIO-10) to identify nest sites within the Project footprint. American badger burrows will be avoided entirely by an appropriate buffer that will include surrounding vegetation, including canopy above the burrow, as applicable. Crews will be trained before the start of work to recognize American badger and burrows and follow proper avoidance protocol (SPR BIO-2). If previously unknown burrows are uncovered during work, crews will consult a biologist. Biologists will flag burrow avoidance buffers during the pre-activity surveys (SPR AD-2). To protect habitat, a Spill Prevention and Response Plan (SPR HAZ-5) will be developed as part of project implementation. The Project proponent will comply with herbicide application regulations (SPR HAZ-6) and restrict use of herbicide to avoid native plants, and will reduce the potential for impacts to habitat occupied by this species. During prescribed herbivory activities, a wildlife-friendly fencing will be installed that will allow safe passage for American badger across the landscape (SPR BIO 11). MM BIO-2a, BIO-2b, BIO-3a, and BIO-4 would be implemented, including avoiding protected aquatic features, targeting removal of non-native vegetation, removing strategic native vegetation to retain habitat function and prevent type conversion. If American badger is detected during focused surveys or assumed present, a no-disturbance buffer would be established around the den or habitat assumed to be occupied, the size of which would be determined by the qualified RPF or biologist, and no treatment activities would occur within this buffer. If any individual of this species is detected during pre-activity surveys or work, the animal will be allowed to leave the area of its own volition. With these additional focused MMs, impacts to nesting birds would be reduced to less than significant. This impact is consistent with the CalVTP PEIR. Biological monitoring will occur during treatment activities within or adjacent to suitable habitat areas, and dens will be flagged for avoidance and establishing no-work buffers. Impacts would be less than significant with mitigation, consistent with the PEIR. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>MM 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> <ul style="list-style-type: none"> For all treatment activities except prescribed burning, the project proponent will establish a no-disturbance buffer around occupied sites (e.g., nests, dens, roosts, middens, burrows, nurseries). Buffer size will be determined by a qualified RPF or biologist using the most current, commonly accepted science and will consider published agency guidance; however, buffers will generally be a minimum of 100 feet, unless site conditions indicate a smaller buffer would be sufficient for protection or a larger buffer would be needed. Factors to be considered in determining buffer size will include but not be limited to the species’ tolerance to disturbance; the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; baseline levels of noise and human activity; and treatment activity. Buffer size may be adjusted if the qualified RPF or biologist determines that such an adjustment would not be likely to adversely affect (i.e., cause mortality, injury, or disturbance to) the species within the nest, den, burrow, or other occupied site. If a no-disturbance buffer is reduced below 100 feet from an occupied site, a qualified RPF or biologist will provide the project proponent with a site- and/or treatment activity-specific explanation for the buffer reduction, which will be included in the PSA. After completion of the PSA and prior to or during treatment implementation, if there is any deviation (e.g., further reduction) from the reduced buffer as explained in the PSA, this will be documented in the post-project implementation report (referred to by CAL FIRE as a Completion Report). No-disturbance buffers will be marked with high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations (e.g., edge of a roadway). No activity will occur within the buffer areas until the qualified RPF or biologist has determined that the young have fledged or dispersed; the nest, den, or other occurrence is no longer active; or reducing the buffer would not likely result in disturbance, mortality, or injury. A qualified RPF, biologist, or biological technician will be required to monitor the 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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.</p> <ul style="list-style-type: none"> 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> <p>For all treatment activities, the project proponent will design treatment activities to maintain the habitat function by implementing the following:</p> <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; tree snags; large raptor nests [including inactive nests]; downed woody debris). These habitat features will be marked and treatments applied to the features will be designed to minimize or avoid the loss or degradation of suitable habitat for listed species during treatments. Identification and treatment of these features will be based on the life history and habitat requirements of the affected species and the most current, commonly accepted science. If it is determined during implementation of SPR BIO-1 and SPR BIO-10 that special-status wildlife with specific requirements for high canopy cover (e.g., northern goshawk, Sierra Nevada snowshoe hare) are present within a treatment area, then tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species (as determined by expert opinion, published habitat association information, or other documented standards that are commonly accepted) such that the habitat function is maintained. A qualified RPF or biologist will determine if, after implementation of the impact avoidance measures listed above, the habitat function will remain for the affected species after implementation of the treatment. The 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>qualified RPF or biologist may consult with CDFW and/or USFWS for technical information regarding habitat function.</p> <ul style="list-style-type: none"> 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 MM BIO-2c will be implemented. <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><i>Project-Specific Implementation</i></p> <p>If other (i.e., non-listed) special-status wildlife species are observed during focused or protocol-level surveys (conducted pursuant to SPR BIO-10), or the species is assumed to be present in lieu of conducting surveys, the project proponent would avoid or minimize adverse effects on the species by implementing the following:</p> <ul style="list-style-type: none"> If California newt or western pond turtle are detected during focused surveys, the project proponent would require flagging areas for avoidance in which no treatment activities would occur, biological monitoring, or other measures recommended by CDFW as necessary to avoid injury to or mortality of 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>these species. If impacts would remain significant under CEQA and the project proponent determines that additional mitigation is necessary to reduce significant impacts, MM BIO-2c would be required, and incidental take permitting under CESA may be required pursuant to consultation with CDFW.</p> <ul style="list-style-type: none"> • If active special-status bird nests are detected during focused surveys, a no-disturbance buffer of at least 0.5 mile would be established around American peregrine falcon and golden eagle nests, 0.25 mile for white-tailed kite nests, and at least 100 feet around the nests of other special-status birds, and no treatment activities would occur within this buffer until the chicks have fledged as determined by a qualified RPF or biologist. • If San Francisco dusky-footed woodrat nest is identified during focused surveys, a minimum 10-foot no-disturbance buffer would be established around the nest which would be assumed to be occupied. The size of the buffer would be determined by the qualified RPF or biologist, and no treatment activities would occur within this buffer. • If American badger is detected during focused surveys or assumed present, a no-disturbance buffer would be established around the den or habitat assumed to be occupied, the size of which would be determined by the qualified RPF or biologist, and no treatment activities would occur within this buffer. • If special-status bat roosts are identified during focused surveys, a no-disturbance buffer of 250 feet would be established around active pallid bat, Townsend’s big-eared bat, and other special status bat roosts and mechanical treatments, manual treatments, and broadcast and pile burning would not occur within this buffer. 				
<p>MM 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 MMs BIO-2a, BIO-2b, BIO-2d, BIO-2e, BIO-2f, or BIO-2g cannot be implemented and the project proponent determines that additional mitigation is necessary to reduce significant impacts, the project proponent will compensate for such impacts to species or habitat by acquiring and/or protecting land that provides (or will provide in the case of restoration) habitat function for affected species that is at least equivalent to the habitat function removed or degraded as a result of the treatment.</p>	<p>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> 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. <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>MM BIO-2d: Implement Protective Measures for Valley Elderberry Longhorn Beetle (All Treatment Activities)</p> <p>If elderberry shrubs within the documented range of valley elderberry longhorn beetle are identified during review and surveys for SPR BIO-1, and valley elderberry longhorn beetle or likely occupied suitable elderberry habitat (e.g., within riparian, within historic riparian, containing exit holes) is confirmed to be present during protocol-level surveys following the protocol outlined in USFWS 2017 per SPR BIO-10, the following protective measures will be implemented to avoid and minimize impacts to valley elderberry longhorn beetle:</p> <ul style="list-style-type: none"> If elderberry shrubs are 165 feet or more from the treatment area, and treatment activities would not encroach within this distance, direct or indirect impacts are not expected and further mitigation is not required. If elderberry shrubs are located within 165 feet of the treatment area, the following measures will be implemented: <ul style="list-style-type: none"> A minimum avoidance area of at least 20 feet from the dripline of each elderberry plant will be fenced or flagged and maintained to avoid direct impacts (e.g., damage to root system) that could damage or kill the plant, with the exception of the following activities: <ul style="list-style-type: none"> Manual trimming of elderberry shrubs will only occur between November and February and will avoid removal of any branches or stems that are greater than or equal to 1 inch in diameter to avoid and minimize adverse effects on valley elderberry longhorn beetle. Manual or mechanical vegetation treatment within the drip line of any elderberry shrub will be limited to the season when adults are not active (August–February), will be limited to methods that do not cause ground disturbance, and will avoid damaging the elderberry. 	<p>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> o A qualified RPF, biologist, or biological technician familiar with valley elderberry longhorn beetle and its life history will monitor the work area to verify the avoidance and minimization measures are implemented. The qualified RPF, biologist, or biological technician will have the authority to stop any treatment activities that could result in potential adverse effects to valley elderberry longhorn beetle. <p>If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance of valley elderberry longhorn beetle or degradation of occupied habitat such that its function would not be maintained, the project proponent will implement MM BIO-2c.</p>				
<p>MM BIO-2e: Design Treatment to Retain Special-Status Butterfly Host Plants (All Treatment Activities)</p> <p>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 MM BIO-2c.</p>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Before and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY				
<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 if after implementation of the treatment, habitat function will remain for the affected species. For species listed under CESA or ESA or that are fully protected, the qualified RPF or biologist will consult with CDFW and/or USFWS regarding this determination. If consultation determines that mortality, injury, or disturbance of listed butterflies or degradation of occupied habitat such that its function would not be maintained would occur, the project proponent will implement MM 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 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 MM 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 style="text-align: center;">Table 3.6-34 Special-Status Butterflies and Associated Host Plants</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #cccccc;">Butterfly Species</th> <th style="background-color: #cccccc;">Host Plants</th> </tr> </thead> <tbody> <tr> <td>bay checkerspot butterfly</td> <td>dwarf plantain (<i>Plantago virginica</i>), purple owl's clover (<i>Castilleja exserta</i>)</td> </tr> </tbody> </table>	Butterfly Species	Host Plants	bay checkerspot butterfly	dwarf plantain (<i>Plantago virginica</i>), purple owl's clover (<i>Castilleja exserta</i>)				
Butterfly Species	Host Plants							
bay checkerspot butterfly	dwarf plantain (<i>Plantago virginica</i>), purple owl's clover (<i>Castilleja exserta</i>)							



MITIGATION MEASURES		APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
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				
<i>Project-Specific Implementation</i>					



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>Monarch butterfly, monarch larva host plants (region-specific native milkweeds: <i>Asclepias californica</i>, <i>A. fascicularis</i>, or <i>A. speciosa</i>), or flowering nectar plants (e.g., <i>Achillea millefolium</i>, <i>Agastache urticifolia</i>, <i>Arctostaphylos</i> spp., <i>Baccharis pilularis</i>, <i>B. salicifolia</i>, <i>Ceanothus</i> spp., <i>Grindelia</i> spp., <i>Helianthus</i> spp., <i>Heteromeles arbutifolia</i>, <i>Monardella</i> spp., <i>Salix</i> spp., <i>Salvia</i> spp., <i>Solidago</i> spp., <i>Verbena lasiostachys</i>, etc.) are observed during focused surveys (conducted pursuant to SPR BIO-10), or the species is assumed to be present in lieu of conducting surveys, the project proponent would avoid or minimize adverse effects on the species by implementing the following:</p> <ul style="list-style-type: none"> • If feasible, treatment activities would occur during non-blooming periods for Monarch butterfly host plants and nectar plants. If avoiding larval stage is deemed infeasible for project implementation, Monarch butterfly caterpillars and host plants that are detected during focused surveys would be avoided. The project proponent would require flagging areas for avoidance in which no treatment activities would occur, biological monitoring would be required, and/or other measures recommended by CDFW as necessary to avoid injury to or mortality of these species or impacts to the population. • Treatments will be designed to retain milkweed (<i>Asclepias</i> spp.) plants in the Project area as feasible. Large patches of milkweed plants in a treatment area will be marked with high-visibility flagging, fencing, stakes, or other methods, and these plants will not be removed or trampled during treatment activities. • Broadcast burning and mowing in habitat suitable for monarch will be restricted to October 31 to March 15. • Treatments will be conducted in a patchy pattern in habitat suitable for monarch, such that the entirety of the habitat is not burned or removed, and untreated portions of suitable habitat are retained. 				
<p>MM 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>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	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 virisis</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>If the project proponent cannot implement the measures above to avoid mortality, injury, or disturbance to listed beetles, flies, grasshoppers, and snails, or degradation of suitable habitat such that its function would not be maintained, the project proponent will implement MM BIO-2c.</p>				
<p>MM 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). 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Before and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> Herbicides will not be applied to flowering native plants within occupied or suitable habitat to the extent feasible during the flight season (March–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 occupied (or assumed to be occupied) habitat such that its function would not be maintained would occur, the project proponent will implement MM 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.</p> <p>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 applying feasible treatment design alternatives and impact minimization measures, then MM 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>				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p><i>Project-Specific Implementation</i></p> <p>If western bumble bee suitable habitat, foraging adults, nest burrows, and overwintering burrows are observed during focused surveys using CDFW guidelines (CDFW 2023b; conducted pursuant to SPR BIO-10) or the species is assumed to be present in lieu of conducting surveys, the project proponent would avoid or minimize adverse effects on the species by implementing the following:</p> <ul style="list-style-type: none"> • If feasible, treatment activities would occur during periods when western bumble bee colonies are least active (e.g., October–January). If avoiding peak colony active time, queen and gyne flight periods is deemed infeasible for project implementation, project proponent would require flagging areas for avoidance in which no treatment activities would occur, biological monitoring would be required, and/or other measures recommended by CDFW as necessary to avoid injury to or mortality of these species or impacts to the population. Surveys for western bumble bee colonies would be conducted during queen flight season (February – March), colony active period (April – September), and gyne flight season (October – November). Surveys conducted during these active periods are considered the most effective way to protect the species; however, surveys may fail to detect the presence of a western bumblebee. A project proponent may choose to assume presence and rely on habitat as an indicator of presence in lieu of or in addition to surveys. • Bumble bees move nests each year, and therefore surveys should be repeated each year. Even if surveys from a particular project site failed to detect bumble bees within one year, additional surveys would be performed each year or presence would be assumed, and a qualified biologist would conduct pretreatment surveys and monitor treatment activities. • If any of the candidate bumble bee species are detected during surveys, the biologist would notify CDFW as further coordination may be required to avoid or mitigate certain impacts. As very little is known about nesting or overwintering sites of the candidate species, if nest or overwintering sites are discovered or can be documented, contact (preferably within three days) CDFW (wildlifemgt@wildlife.ca.gov), USFWS (for <i>B. franklini</i>, <i>B. occidentalis</i>, and/or <i>B. suckleyi</i>), as well as regional CDFW staff (Robynn.Swan@wildlife.ca.gov) in which the sighting occurred to contribute to the knowledge pool for bumble bee habitat and behavior. • If CESA-protected bumble bees are observed, project proponents may consult with CDFW to obtain an Incidental Take Permit (ITP) if take of CESA-protected bumble bees may occur during project activities. 				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>MM BIO-2h: Avoid Potential Disease Transmission Between Domestic Livestock and Special-Status Ungulates (Prescribed Herbivory)</p> <p>The project proponent will implement the following measure if treatment activities are planned within the range of desert bighorn sheep, peninsular bighorn sheep, Sierra Nevada bighorn sheep, or pronghorn:</p> <ul style="list-style-type: none"> • Prescribed herbivory activities will be prohibited within a 14-mile buffer around suitable habitat for any species of bighorn sheep within the range of these species consistent with the more stringent recommendations in the bighorn sheep recovery plan (USFWS 2007). • Prescribed herbivory activities will be avoided within the range of pronghorn where feasible (where this range does not overlap with the range of any species of bighorn sheep). 	<p>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>
<p>MM 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 Appendix 2, Table A2 of California vegetation (Sawyer, Keeler-Wolf, and Evens 2009 or current version, including updated natural communities data online) 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 Van Wagendonk et al. 2018 and Sawyer, Keeler-Wolf, and Evens 2009 or current version, including updated natural communities data online). Treatments will not be implemented in sensitive natural communities that are within their natural fire return interval (i.e., time since last burn is less than the average time required for that vegetation type to recover from fire) or within Condition Class 1. • To the extent feasible, no fuel breaks will be created in sensitive natural communities with rarity ranks of S1 (critically imperiled) and S2 (imperiled). 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Before and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> 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 Van Wagtendonk et al. 2018 and Sawyer, Keeler-Wolf, and Evens 2009 or current version, including updated natural communities data online). 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 MM 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 project proponent determines the impact on sensitive natural communities or oak woodlands</p>				



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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 MM 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>MM BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands</p> <p>If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under MM 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 	<p>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<p>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 mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity. 2. For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat. <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>MM 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. 	<p>Initial Treatment: N Treatment Maintenance: N</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • 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>MM 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). 	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<ul style="list-style-type: none"> • 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. • No fire ignition (nor use of associated accelerants) will occur within the wetland buffer. 				
<p>MM BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites</p> <p>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>	<p>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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. 				
Greenhouse Gas Emissions				
<p>MM GHG-2. Implement GHG Emission Reduction Techniques During Prescribed Burns</p> <p>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 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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior and during</p>	<p>MOFD</p>	<p>MOFD</p>



MITIGATION MEASURES	APPLICABLE? (Y/N)	TIMING	IMPLEMENTING ENTITY	VERIFYING/MONITORING ENTITY
<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>				
Hazardous Materials, Public Health, and Safety				
<p>MM HAZ-3: Identify and Avoid Known Hazardous Waste Sites</p> <p>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>Initial Treatment: Y Treatment Maintenance: Y</p>	<p>Prior</p>	<p>MOFD</p>	<p>MOFD</p>



A.2 References

- Busse, M.D., K.R. Hubbert, and E.E.Y. Moghaddas. 2014. Fuel Reduction Practices and Their Effects on Soil Quality. General Technical Report PSW-GTR-241. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. Available at: https://www.fs.usda.gov/psw/publications/documents/psw_gtr241/psw_gtr241.pdf.
- California Department of Fish and Wildlife (CDFW). 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. State of California, California Natural Resources Agency, Department of Fish and Wildlife. March 20. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline>.
- California Department of Fish and Wildlife (CDFW). 2023a. Survey and Monitoring Protocols and Guidelines. West Sacramento, CA: Wildlife Branch – Wildlife Diversity Program. Accessed June. Available at: <https://wildlife.ca.gov/Conservation/Survey-Protocols>.
- California Department of Fish and Wildlife (CDFW). 2023b. Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species. June 6. Available at: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=213150&inline>.
- California Department of Forestry and Fire Protection Resource Management (CAL FIRE). 2019. California Forest Practice Rules 2019. Sacramento, CA: Resource Management, Forest Practice Program. Available at: https://bof.fire.ca.gov/media/9095/2019-forest-practice-rules-and-act_final_version-ada.pdf.
- California Invasive Plant Council (Cal-IPC). 2012. Preventing the Spread of Invasive Plants: Best Management Practices for Land Managers (3rd Edition). Cal-IPC Publication 2012-03. California Invasive Plant Council. Berkeley, CA.
- California Native Plant Society (CNPS). 2023. The Manual of California Vegetation Online. Accessed June. Available at: <http://vegetation.cnps.org/>.
- California Water Boards. 2019. State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2; revised April 6, 2021. State Water Resources Control Board. Available at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/2021/procedures.pdf.
- de Groot, R.S., M.A. Wilson, and R.M. Boumans. 2002. A Typology for the Classification, Description and Valuation of Ecosystem Functions, Goods and Services. *Ecological Economics* 41:393–408.
- Environmental Laboratory. 1987. U.S. Army Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Corps of Engineers Waterways Experiment Station.



- Hammerson, G. A. (1979). Thermal Ecology of the Striped Racer, *Masticophis lateralis*. *Herpetologica*, 35(3), 267–273. <http://www.jstor.org/stable/3891698>
- Miller, A., and J.A. Alvarez. 2016. Habitat Use and Management Considerations for the Threatened Alameda Whipsnake (*Masticophis lateralis euryxanthus*) in Central California. *Western Wildlife* 3: 29–32. Available at: https://wwjournal.org/wp-content/uploads/sites/9/2021/05/Miller_Alvarez_WW_2016.pdf.
- National Marine Fisheries Service (NMFS) and several other agencies. 2018. Accelerated Wood Recruitment and Timber Operations: Process Guidance from the California Timber Harvest Review Team Agencies and NMFS. Timberland Conservation and Fire Resiliency Program white paper. September 24. Available at: https://www.conservationgateway.org/Documents/CA%20Salmon-WFSWG_SectionV_GuidanceDocument_Final-a.pdf.
- National Wildfire Coordinating Group (NWCG). 2020. NWCG Smoke Management Guide for Prescribed Fire. PMS 420-3, NFES 001279. November. Available at: <https://www.nwcg.gov/sites/default/files/publications/pms420-3.pdf>.
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation. Second edition. California Native Plant Society and California Department of Fish and Game. Available at: <https://vegetation.cnps.org/>.
- Stebbins, R. C. 2003. A Field Guide to Western Reptiles and Amphibians. Third Edition. Boston: Houghton Mifflin Company.
- Trenham, P. C. 1998. Demography, migration and metapopulation structure of pond breeding salamanders. Ph.D. dissertation. University of California, Davis.
- University of California (UC) Cooperative Extension, Marin County; The Watershed Nursery; USDA Forest Service, Pacific Southwest Research Station; and Golden Gate Parks Conservancy. 2016. The Working Group for Phytophthoras in Native Habitats. University of California Agriculture and Natural Resources. Available at: <https://www.cal-ipc.org/docs/symposia/archive/pdf/2016/Posters/Alexander.pdf>.
- U.S. Fish and Wildlife Service (USFWS). 2000. Final Determination of Critical Habitat for the Alameda Whipsnake (*Masticophis lateralis euryxanthus*). <https://www.federalregister.gov/documents/2000/10/03/00-24763/endangered-and-threatened-wildlife-and-plants-final-determination-of-critical-habitat-for-the>
- U.S. Fish and Wildlife Service (USFWS). 2005. Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog. August 1. Sacramento, CA: Sacramento Fish and Wildlife



Office. Available at:

<https://ipac.ecosphere.fws.gov/guideline/survey/population/205/office/11420.pdf>.

U.S. Fish and Wildlife Service (USFWS). 2007 (September). Recovery Plan for the Sierra Nevada Bighorn Sheep. Sacramento, CA: California/Nevada Operations Office. September 24. Available at:

<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=27634&inline>.

U.S. Fish and Wildlife Service (USFWS). 2011. Alameda Whipsnake (*Masticophis lateralis euryxanthus*) 5-Year Review: Summary and Evaluation. Sacramento, CA: Sacramento Fish and Wildlife Office.

Available at: https://esadocs.defenders-cci.org/ESAdocs/five_year_review/doc3886.pdf.

U.S. Fish and Wildlife Service (USFWS). 2017. Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). Sacramento, CA: Sacramento Fish and Wildlife Office. Available at:

<https://ipac.ecosphere.fws.gov/guideline/assessment/population/436/office/11420.pdf>.

Van Wagtendonk, J.W., N.G. Sugihara, S.L. Stephens, A.E. Thode, K.E. Shaffer, and J.A. Fites-Kaufman. 2018. Fire in California's Ecosystems. Second edition. Oakland: University of California Press.

Xerces Society for Invertebrate Conservation, Defenders of Wildlife, and Center for Food Safety. 2018 (October). A Petition to the State of California Fish and Game Commission to List the Crotch Bumble Bee (*Bombus crotchii*), Franklin's Bumble Bee (*Bombus franklini*), Suckley Cuckoo Bumble Bee (*Bombus suckleyi*), and Western Bumble Bee (*Bombus occidentalis occidentalis*) as Endangered under the California Endangered Species Act.