

Tunnel East Bay Hills Shaded Fuel Break Project Contra Costa County, California

CalVTP ID 2023-22



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ATTACHMENTS

- Attachment A.** Mitigation and Monitoring Reporting Program
- Attachment B.** Biological Resources Report
- Attachment C.** Cultural Resources (Confidential)
- Attachment D.** Statement of Overriding Considerations



LIST OF ABBREVIATIONS

AB	Assembly Bill
BAAQMD	Bay Area Air Quality Management District
BMP	Best Management Practice
CAAQS	California ambient air quality standards
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal-IPC	California Invasive Plant Council
CalVTP	California Vegetation Treatment Program
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
CWHR	California Wildlife Habitat Relationship
DBH	diameter at breast height
EBMUD	East Bay Municipal Utility District
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
ESHA	Environmentally Sensitive Habitat Area
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GIS	Geographic Information Systems
HCP	Habitat Conservation Plan
LCP	Local Coastal Program
LTMP	Long-Term Management Plan
LUST	leaking underground storage tank
MM	mitigation measure



MMRP	mitigation monitoring and reporting program
MOFD	Moraga-Orinda Fire District
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NOAA	National Oceanic and Atmospheric Administration
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
PEIR	Programmatic Environmental Impact Report
PFIRS	Prescribed Fire Information Reporting System
PG&E	Pacific Gas & Electric Company
PRC	Public Resources Code
PSA	Project-Specific Analysis
RPF	Registered Professional Forester
RWQCB	Regional Water Quality Control Board
SENL	single event noise level
SOD	Sudden Oak Death
SPR	standard project requirement
SR	State Route
SRA	State Responsibility Area
TMP	traffic management plan
USFWS	US Fish and Wildlife Service
USGS	US Geological Survey
VMT	vehicle miles traveled
WDR	waste discharge requirement
WHF	Wildlife Heritage Foundation
WLPZ	Watercourse and Lake Protection Zone
WUI	wildland-urban interface



1.0 INTRODUCTION

1.1 Overview of the Proposed Project

The Moraga-Orinda Fire District (MOFD) is proposing a shaded fuel break project in the San Francisco East Bay within its Contra Costa County service area. The Tunnel East Bay Hills Shaded Fuel Break Project (Project) would be implemented on land owned and/or managed by private landowners in and adjacent to the Cities of Orinda, the Town of Moraga, and the unincorporated communities of Canyon, Eastport, and Valle Vista. Other landowners include the East Bay Municipal Utility District (EBMUD), Bigbury Company, John Muir Land Trust, St. Mary's College, and Pacific Gas and Electric (PG&E).

The goal of the Project is to create and maintain a reduced fuel zone around the Contra Costa County communities located south of the Grove Shafter Freeway (Highway 24) (Figures 1a and 1b). The Project would provide a strategic location for firefighters to suppress fires, reduce the intensity of incipient fires, and prevent incipient fires from laddering into the tree canopy or causing fires to drop to the ground within the shaded fuel break and wildland-urban interface (WUI). The treatments proposed in this Project-Specific Analysis (PSA) would reduce dangerous wildfire fuels in a deliberate manner designed to minimize environmental impacts to wildlife and protected plants consistent with the California Vegetation Treatment Plan (CalVTP) Programmatic Environmental Impact Report (PEIR; Ascent Environmental 2019). The reduced fuel zone addressed in this Project is the southern extension of an existing shaded fuel break that would complete the boundary around MOFD's coverage area (Figure 2). The Project would involve conducting vegetation management activities to contribute shaded fuel break/WUI fuel reduction segments to a continuous regional effort, totaling approximately 10 miles of shaded fuel break and WUI fuel reduction within an approximate 1,320-acre area. The Project treatments are described in Section 2.

For the entire state, the CalVTP PEIR identified 20.3 million acres within the 31-million-acre State Responsibility Area (SRA) that may be appropriate for vegetation treatments as part of the CalVTP. The PEIR calls this the "treatable landscape" or "treatable areas." CalVTP recognizes that the treatable landscape represents areas suitable for CalVTP vegetation treatments, but projects will not necessarily occur in every location within the treatable landscape. The location and geographic extent of projects will be determined based on several factors, including environmental constraints and treatment objectives, which are analyzed for the proposed project within this PSA.

Of the approximate 1,320-acre Project footprint, approximately 437 acres are located within the CalVTP treatable landscape, and approximately 883 acres are outside of the defined treatable landscape (Figures 3a, 3b, 3c, and 3d). While all six Work Areas contain portions that are within the CalVTP treatable landscape, all Work Areas include land that is outside the treatable landscape (Table 1). One large portion outside the treatable landscape is the Rheem Valley, which is in the northern portion of Work Area 4. It does not heavily overlap the treatable landscape and portions of it are located more than 1 mile from the nearest treatable landscape (Figures 3a, 3b, 3c, and 3d). The southern portion of the Rheem Valley is located immediately adjacent to the treatable landscape.



An Addendum to an EIR is appropriate where a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none of the changes or revisions would result in new or substantially more severe significant environmental impacts, consistent with CEQA Section 21166 and CEQA Guidelines Sections 15162, 15163, 15164, and 15168. In this case, there are no changed circumstances, but the proposed revision or change in the project, compared to the PEIR, is the inclusion of areas of the scattered sections of Local Responsibility Area (LRA) outside of the CalVTP treatable landscape. The PSA checklist (refer to Section 3, “Addendum/Project-Specific Analysis”) includes the criteria to support an Addendum to the CalVTP PEIR for the inclusion of proposed treatment areas outside the CalVTP treatable landscape. The checklist evaluates each resource in terms of whether the later treatment project, including the “changed condition” of additional geographic area, would result in significant impacts that would be substantially more severe than those covered in the CalVTP PEIR and/or would result in any new impacts that were not covered in the PEIR. This document serves as both a PSA and an Addendum to the CalVTP PEIR to provide CEQA compliance for the proposed vegetation treatments within and outside of the treatable landscape. The project-specific mitigation monitoring and reporting program (MMRP), which includes the CalVTP standard project requirements (SPRs) and mitigation measures applicable to the proposed project, is presented in Attachment A. The SPRs identified in the MMRP have been incorporated into the proposed vegetation treatments as a standard part of treatment design and implementation of the proposed project.

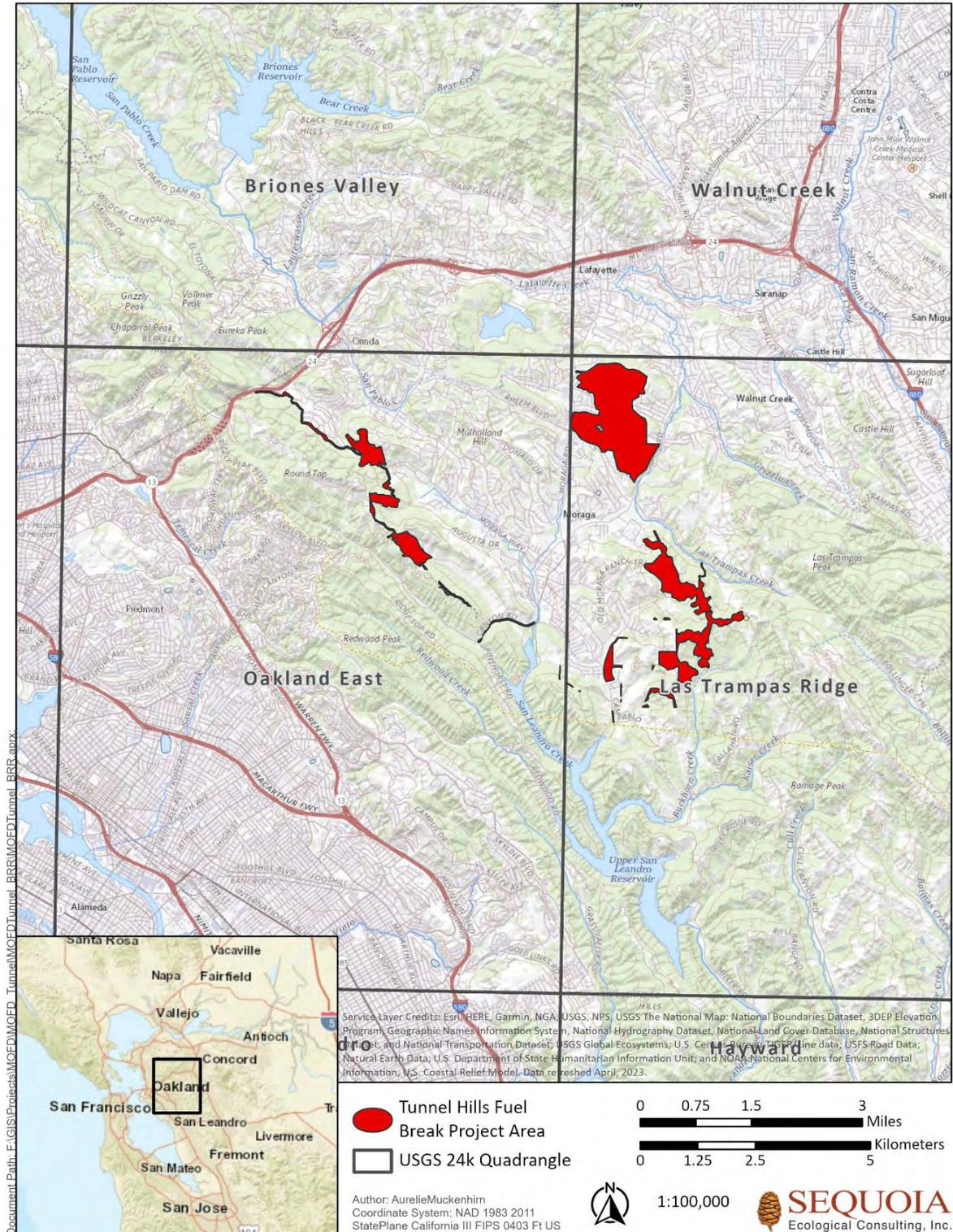


Figure 1a. Regional Setting

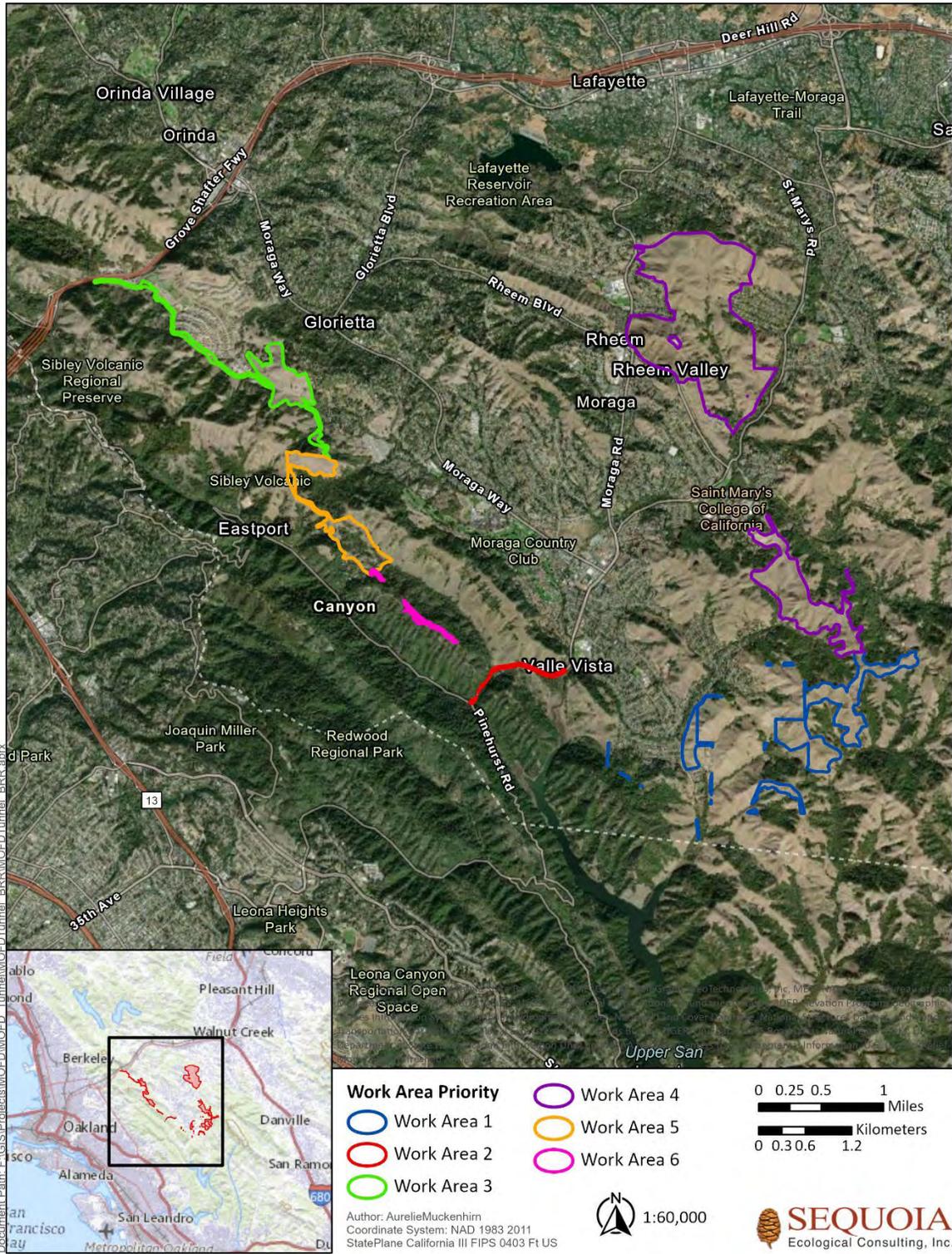


Figure 2b. Project Location

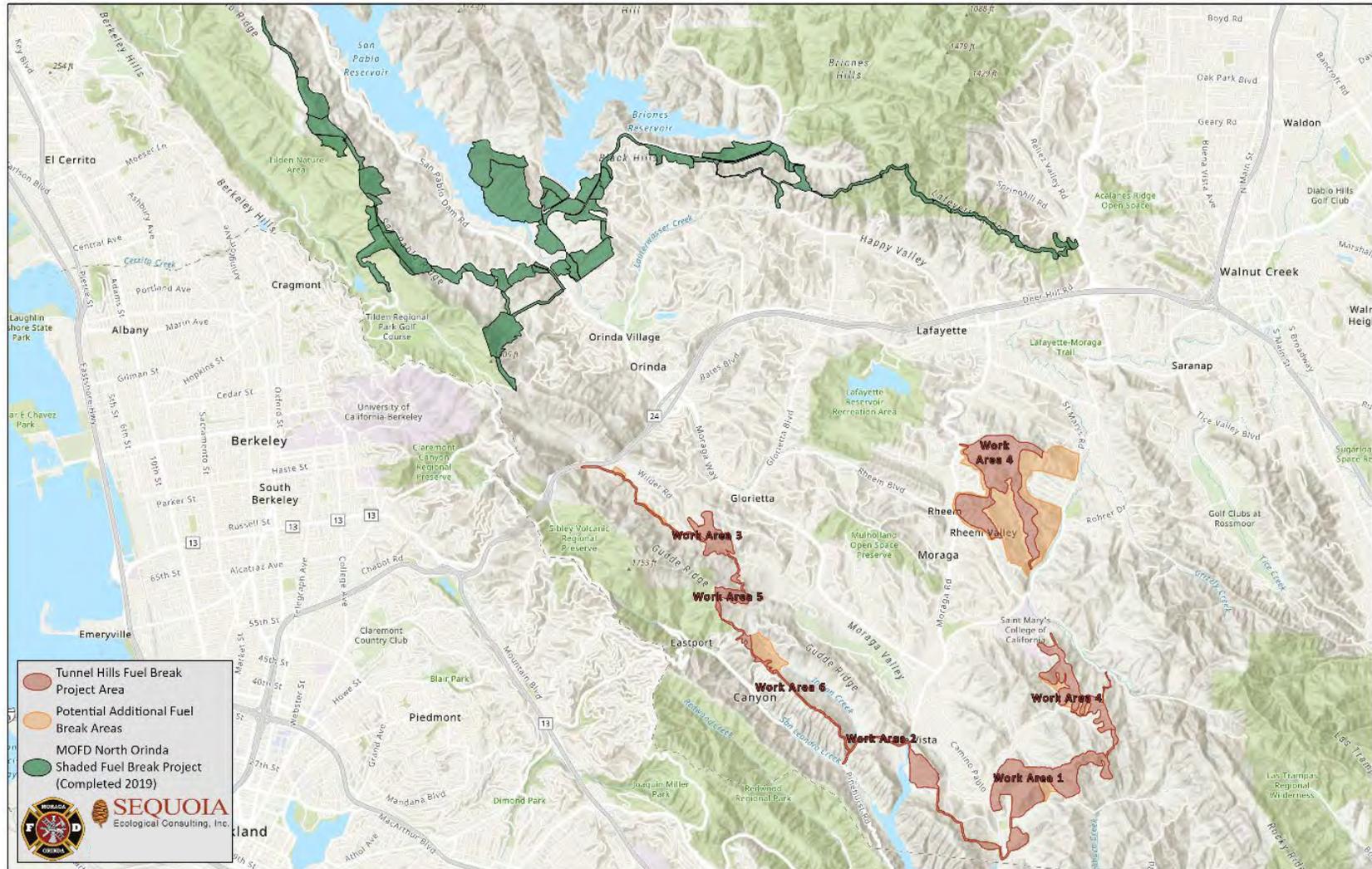


Figure 3. Regional Shaded Fuel Break Effort

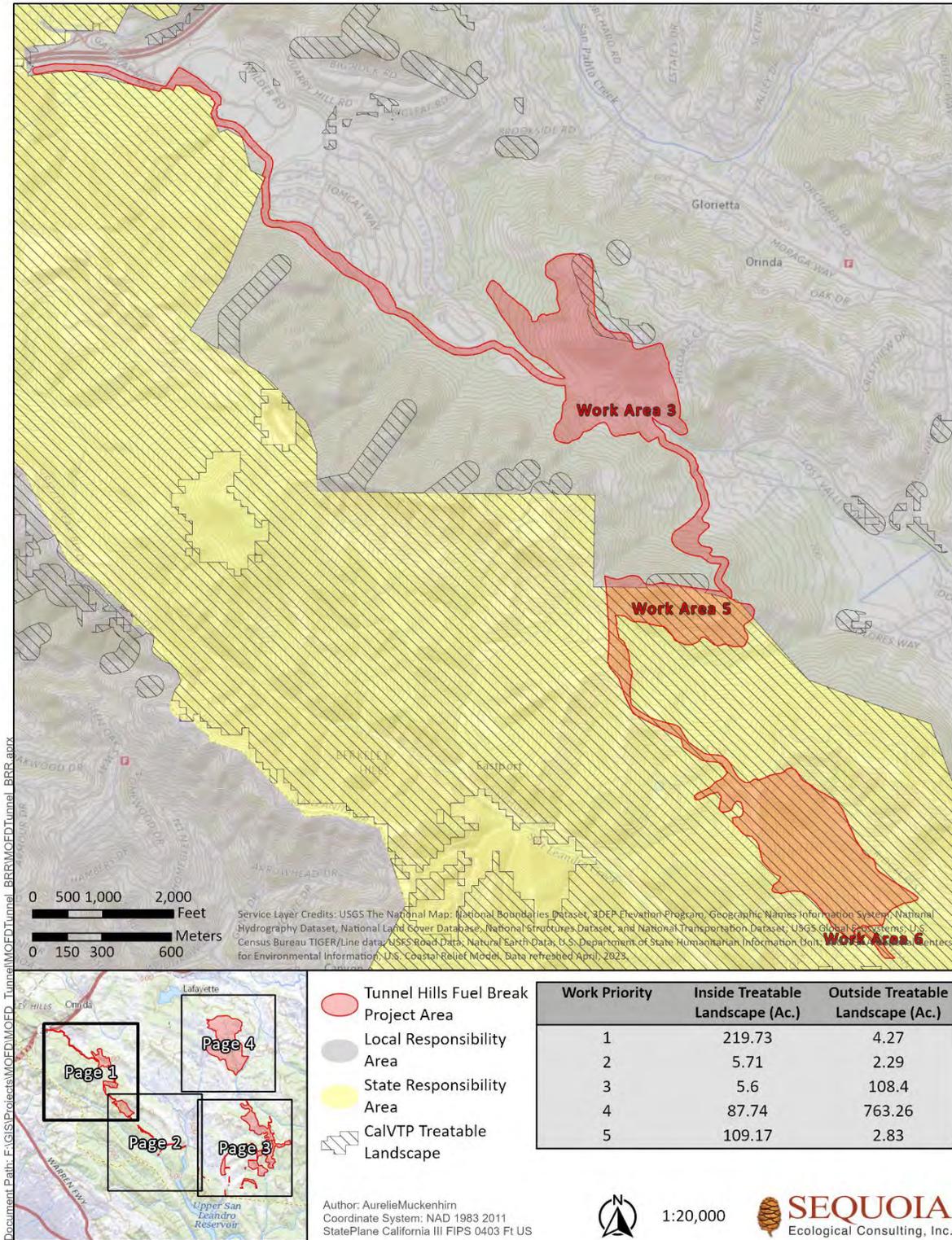


Figure 4a. Acreage Inside and Outside of CalVTP's Defined Treatable Landscape

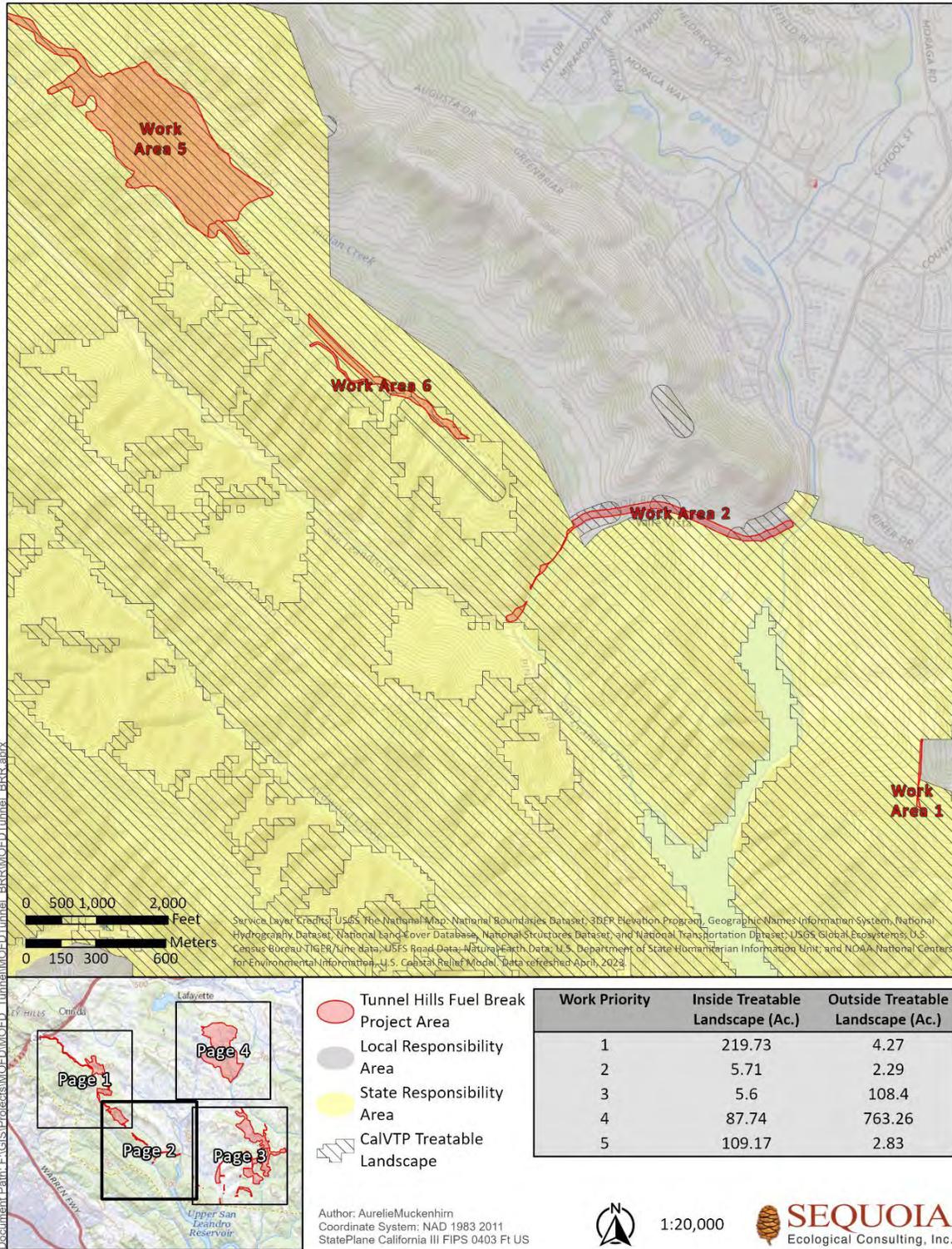


Figure 5b. Acreage Inside and Outside of CalVTP’s Defined Treatable Landscape

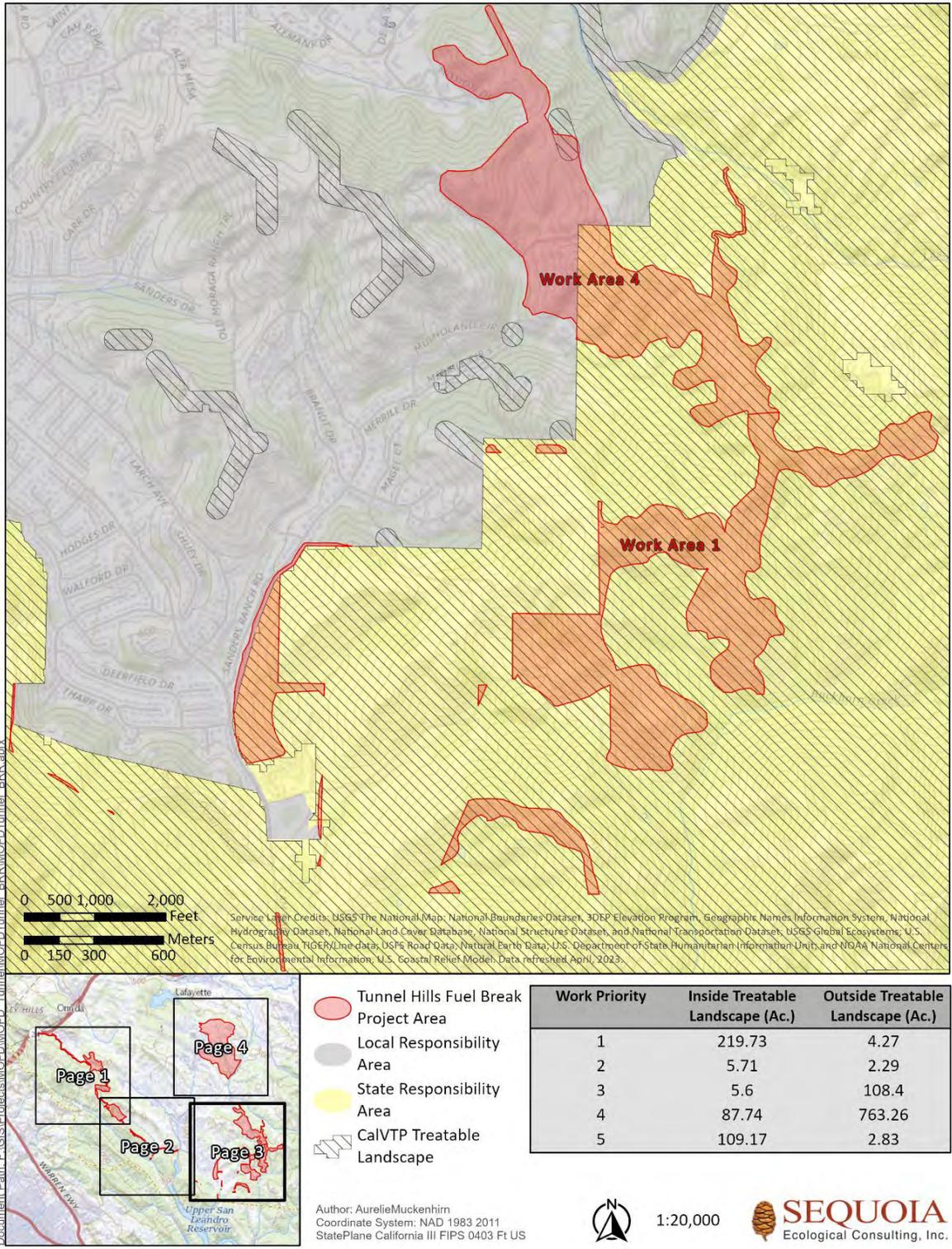


Figure 6c. Acreage Inside and Outside of CalVTP’s Defined Treatable Landscape

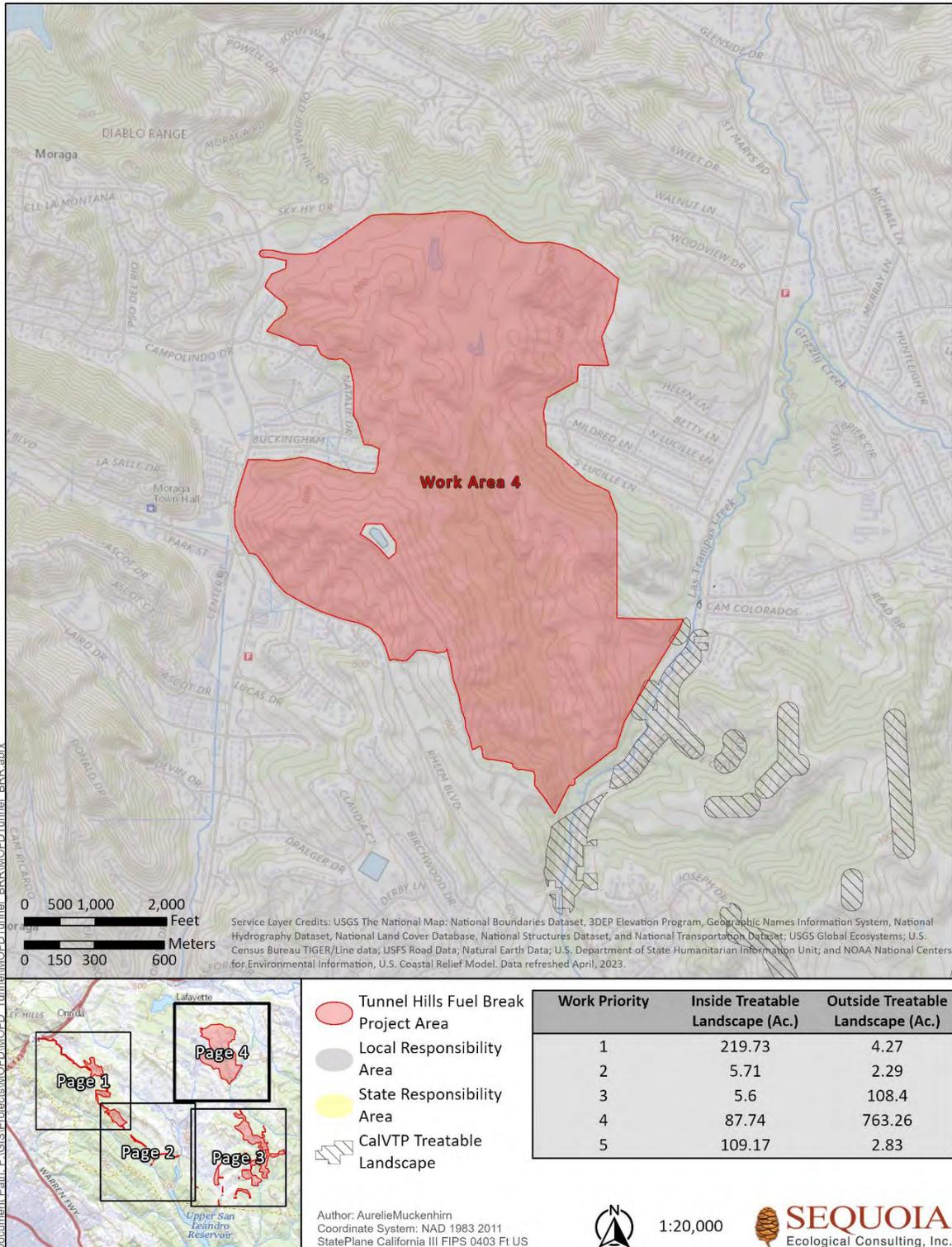


Figure 7d. Acreage Inside and Outside of CalVTP’s Defined Treatable Landscape



Table 1. Project Acreage Within and Outside of CalVTP Mapped Treatable Landscape*

Work Area Number	Total Acreage	Within Treatable Landscape	Outside Treatable Landscape
1	224	220	4
2	8	6	2
3	114	6	108
4	851	88	764
5	112	109	3
6	9	8	1
TOTAL	1,318	436	882

*These numbers were calculated using the CalVTP Treatable Landscape Calculator, and they differ by two (2) acres with those used to calculate those for all desktop analyses. Therefore, throughout the remainder of the PSA, the additional two acres are included, and a total of 1,320 acres is assumed to be the final acreage.

As part of the Biological Resources Report (Attachment B), habitats in project areas outside the treatable landscape were compared to habitats within for consistency and applicability to the CalVTP.

- Work Area 1 is approximately 224 acres, of which 220 acres are within the treatable landscape. Work Area 1 is divided into ten separate portions of different sizes. These areas are generally spread throughout open space around the neighborhoods of Larch and Rancho Laguna Park.
- Work Area 2 is approximately 8 acres, of which approximately 6 acres are within the treatable landscape. Work Area 2 extends for approximately 1 mile along Canyon Road from the intersection of Pinehurst Road to the east.
- Work Area 3 is approximately 114 acres, of which approximately 6 acres are within the treatable landscape and 108 acres are outside the treatable landscape. Work Area 3 is bounded by the Grove Shafter Freeway on the north, extends along the western edge of the Wilder subdivision including Wilder Road, includes some open space in the Lost Valley neighborhood, and abuts Work Area 5 on the south.
- Work Area 4 is approximately 851 acres and is split into two main sections. Approximately 88 acres are within the treatable landscape and 764 acres are outside the treatable landscape. The northern portion of Work Area 4 is bounded by Moraga Road to the west, Rheem Boulevard on the south, St. Mary's Road on the east, and Sky High Drive and Woodview Drive approximately 300 feet to the north. The southern part of Work Area 4 starts on the southern border of St. Mary's College and extends southeast for approximately 1.25 miles.
- Work Area 5 is approximately 112 acres and is split into two main portions. Approximately 110 acres are within the treatable landscape. The northern portion of Work Area 5 includes an open space that is approximately 0.5 mile northeast of the East Bay Regional Park District



Wilcox Station Staging Area, with a linear extension from the northwest corner to the west. The southern portion is approximately 0.3 mile from the northern portion, and it is approximately 0.25 mile east-northeast from Pinehurst Road. It includes open space extending southeast along Ridgecrest Road and abuts Work Area 6.

- Work Area 6 is approximately 9 acres and is split into two portions. Approximately 8 acres are within the treatable landscape. The northwestern portion of Work Area 6 abuts Work Area 5 on the north and extends linearly for approximately 0.15 mile along an unnamed road to the southeast. The southeastern portion starts approximately 0.15 mile southeast of the northwestern portion and extends linearly along an unnamed road along Flicker Ridge for approximately 0.2 mile.

1.2 California Environmental Quality Act

The CalVTP PEIR evaluated the potential environmental effects of implementing qualifying vegetation treatments to reduce the risk of wildfire within the California Department of Forestry and Fire Protection's (CAL FIRE's) SRA.

Serving as the lead agency under the California Environmental Quality Act (CEQA), MOFD proposes to implement vegetation treatments on 1,320 acres of land within Contra Costa County. The proposed treatment types include shaded fuel breaks and fuel reduction at the WUI. The treatment activities and methods include manual vegetation management, mechanical treatment, prescribed herbivory treatment, herbicide application, and prescribed burning.

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

1.3 Purpose of this Project-Specific Analysis and Addendum

This document serves as the PSA to evaluate whether the proposed project is within the scope of the CalVTP PEIR. As described above, the treatment types and treatment activities are consistent with the CalVTP, which identifies the portion of the SRA that may be appropriate for vegetation treatments as "the treatable landscape." One criterion for determining whether a treatment project is within the scope of the CalVTP PEIR is whether it is within the CalVTP treatable landscape (i.e., the geographic extent of analysis covered in the PEIR). Within the Project area, 437 acres are within the treatable landscape and 883 acres are outside of the treatable landscape (Table 1, Figures 3a, 3b, 3c, and 3d).

This document also serves as an addendum to the CalVTP PEIR for the inclusion of the additional 883 acres outside of the treatable landscape. An addendum to an EIR is appropriate when a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the



circumstances surrounding the project have changed, but none of the changes or revisions would result in new or substantially more severe significant environmental impacts. In this case, there are no changed circumstances.

The currently proposed MOFD Project does include one revision to, or change in, the Project, compared to the CalVTP PEIR, which is the inclusion of areas outside of the CalVTP treatable landscape. The PSA checklist (see Section 4) includes the criteria to support an addendum to the CalVTP PEIR for the inclusion of proposed treatment areas outside the CalVTP treatable landscape. The checklist evaluates each resource in terms of whether the later treatment Project, including the minor revision or change to the Project of additional geographic area, would result in significant impacts that would be substantially more severe than those covered in the CalVTP PEIR and/or would result in any new impacts that were not covered in the PEIR. Instructions for Project-specific implementation of certain standard project requirements (SPRs) and mitigation measures (MMs) has been added to tailor the specific impact avoidance and minimization actions relevant to the proposed treatments, agency standard practices, and the conditions and resources present within each treatment site. In all cases, the additional Project-specific implementation instructions and clarifying edits to MMs maintain the SPRs and MMs as equivalent or more effective than those presented in the PEIR.

This document therefore serves as both a PSA and an addendum to the CalVTP PEIR to provide CEQA compliance for the proposed vegetation treatments within and outside of the treatable landscape. The Project-specific mitigation monitoring and reporting program (MMRP), which identifies the CalVTP SPRs and MMs applicable to the Project, is presented in Attachment A. The SPRs identified in the MMRP have been incorporated into the proposed vegetation treatments as a standard part of treatment design and implementation.



2.0 PROJECT DESCRIPTION

The proposed Project would create and maintain a reduced fuel zone in the San Francisco East Bay within MOFD's service area around the Contra Costa County communities south of the Grove Shafter Freeway (Highway 24) (Figures 1a and 1b). The area includes land owned and/or managed by private landowners. Communities included within the MOFD's southern shaded fuel break and WUI fuel reduction are the Cities of Orinda, the Town of Moraga, and the unincorporated communities of Canyon, Eastport, and Valle Vista. Most of the Project area watershed is critical for domestic water supply reservoirs, provides habitat for numerous special-status species, and is very popular recreational land. The more urbanized portions transition into rural residential neighborhoods with well-established native and non-native vegetation. Several major PG&E transmission lines and substations are located in and around the Project vicinity to supply electrical power for the local communities. Numerous commercial and public safety telecommunications facilities that serve the entire San Francisco Bay Area are located on the ridgeline west of Orinda.

The Project layout is generally a horseshoe pattern starting from Wilder and Highway 24, extending south and around Rancho Laguna Park, then extending north through Bollinger Canyon, and ending south of Lafayette. The six Work Areas are each separated into smaller segments and are described in more detail in Section 1. While each of the six Work Areas contain portions of the CalVTP treatable landscape, each includes areas that are outside of the treatable landscape. For example, the Rheem Valley area (the northern portion of Work Area 4) does not heavily overlap the treatable landscape and portions of it are located more than one (1) mile from the nearest treatable landscape (Figures 3a, 3b, 3c, and 3d). The southern portion of the Rheem Valley area is located immediately adjacent to the treatable landscape. Non-residential areas include undeveloped rolling hills and open space managed by public and private entities, the Upper San Leandro Reservoir, and areas of scattered vineyards and infrastructure such as transmission lines and power stations.

In the vicinity, wildfire hazard risk is considered "high" to "very high" due to widespread invasive, noxious, fire-hazardous vegetation, decades of dead vegetation accumulation, over a century of fire suppression, and the increased risk of anthropogenic ignition associated with dense urban development (CAL FIRE 2022). The proposed Project would reduce excess and ladder fuels within an approximately 100-foot wide shaded fuel break and WUI fuel reduction. The objectives of this Project are to:

- Reduce and manage wildfire hazard risk, intensity, and potential rate of spread;
- Reduce the impacts from wildfires on surrounding communities and critical infrastructure;
- Maintain and enhance biological diversity in the area by promoting conditions that favor native plant and animal species;
- Restore vegetation communities to a condition that is conducive to low-intensity wildfire;



- Restore forest health by enhancing native, fire-resilient plant communities, primarily through weed removal; and
- Provide strategic locations to effectively fight wildfires.

The proposed Project would provide essential opportunities for firefighting success by providing areas of lower fire intensity and enhanced fire line production rates. It is recognized that this Project would not stop fire spread during periods of strong Foehn winds with low relative humidity, when firebrands can be blown across fuel breaks. However, shaded fuel breaks provide a point from which firefighting resources can “anchor” and conduct suppression activities with increased fire line construction rates while reducing the amount of air-delivered fire-retardant required to effectively coat vegetation. Slowing fire spread also allows more time to carry out an effective evacuation and reduces the risk of residents being unable to escape an approaching fire. The Project follows a strategically important route that supports these goals.

The Project would significantly reduce the threat of catastrophic fire by reducing fuels critical to the spread of a wildfire. These fuels are understory vegetation, dead/dying trees, and highly combustible brush. Reducing the quantities of these fuels would lower the intensity and speed of a wildfire and allow more time for firefighters to respond. The tree canopy formed by healthy mature trees would remain largely intact to reduce the future growth of brush and understory vegetation, including invasive, non-native plant species. The desired result is to restore fuel loading to more natural levels that can be maintained by the periodic introduction of prescribed fires.

To ensure environmental protection when designing and constructing fuels reduction projects, MOFD utilizes the standard protection practice of identifying and avoiding sensitive resources. A comprehensive list of required Best Management Practices (BMPs) has been developed by CAL FIRE through cooperation with the California Department of Fish and Wildlife (CDFW) and State Water Resource Control Boards (SWRCBs). These include the highly restrictive Forest Practice Rules for the Southern Sub-District of the Coast District. These required BMPs plus the CalVTP’s Standard Project Requirements (SPRs) and additional MMs would be used to provide natural resource protection when implementing this fuels reduction project. Additional site-specific protection measures would be applied based upon consultation with the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the CDFW. All prescribed burning would be done under burn permits from the Bay Area Air Quality Management District (BAAQMD) to minimize potential environmental impacts. All work on public lands would be conducted in accordance with their existing stewardship and habitat management practices.

This Project would reduce dangerous wildfire fuels in a deliberate manner designed to minimize environmental impacts to wildlife and protected plants. CalVTP treatments aim to mimic conditions that exist in a natural environment where natural fires would have occurred. Forest health benefits from treatments that reduce invasive species cover, maintain native tree canopy, reduce the likelihood of crown fire, and reduce potential tree mortality from wildfire. This Project proposes two CalVTP treatments: shaded fuel breaks and WUI fuel reduction, per CalVTP PEIR Section 2.5.1. Proposed



treatment activities include prescribed burning, manual treatments, mechanical treatments, prescribed herbivory, and herbicides (spot treatment), per CalVTP PEIR Section 2.5.2.

Six separate Work Areas totaling approximately 1,320 acres of treatment area within Contra Costa County have been delineated and include land owned and/or managed by state jurisdictions and private landowners. Land is owned and/or managed by private landowners in and adjacent to the Cities of Orinda, the Town of Moraga, and the unincorporated communities of Canyon, Eastport, and Valle Vista. Landowners include East Bay Municipal Utility District (EBMUD), Bigbury Company, John Muir Land Trust, St. Mary's College, and Pacific Gas and Electric (PG&E).

2.1 Treatment Types

The proposed Project would be conducted using several treatment strategies based upon the prevailing vegetation types, topographic characteristics, environmental considerations, and surrounding land uses. The resulting width of the treatments would also vary based upon these same conditions to meet the Project goals while minimizing environmental impacts and maintaining a natural appearance. Specific treatment objectives include strategically retaining scrub habitat in natural islands for state and federally threatened Alameda whipsnake (*Masticophis lateralis euryxanthus*; AWS) while still creating opportunities for emergency responders to address wildfires.

Proposed treatment types are WUI fuel reduction and shaded fuel breaks consistent with CalVTP PEIR Section 2.5.1 and would occur for all Work Areas. Strategic vegetation removal would reduce fuels while simultaneously creating a linear break for firefighting resources to contain or stop a fire. Firefighters would utilize the shaded fuel break from the ground or use it to facilitate air resources in dropping water or retardant. The CalVTP treatment types to be used in the proposed project are provided in the following subsections.

2.1.1 Wildland-Urban Interface Fuel Reduction

Located in WUI-designated areas, fuel reduction would generally consist of strategic removal of vegetation to prevent or slow the spread of non-wind-driven wildfire between structures and wildlands, and vice versa per CalVTP PEIR Chapter 2, PD 3.1.2.

For the Project, in areas where wildland and manmade structures overlap, higher intensity fuel reduction typical of defensible space would occur within 100 to 150 feet of manmade structures, as determined by fire professionals, and based on site conditions. Higher intensity fuel reduction would focus on vertical and horizontal spacing in addition to removal of invasive species, noxious weeds, and dead and dying vegetation. Beyond 100 to 150 feet from manmade structures, vegetation treatments would be implemented with lower intensity. Lower intensity treatments focus primarily on removal of invasive plants, noxious weeds, fire hazardous vegetation, and dead and dying vegetation, and limbing up of trees.



2.1.2 Shaded Fuel Breaks

In strategic locations, shaded fuel breaks create zones of vegetation removal and ongoing maintenance, often in a linear layout that support fire suppression by providing responders with a staging area or access to remote landscape for fire control actions. While shaded fuel breaks can passively interrupt the path of a fire or halt or slow its progress, this is not the primary goal of constructing shaded fuel breaks, per CalVTP PEIR Chapter 2 PD 3.1.2.

For the Project, development and maintenance of a fuel reduction zone within a 100-foot wide shaded fuel break would extend around community structures located adjacent to undeveloped open spaces. Portions of the shaded fuel break would extend up to a width of 300 feet based on topography, site conditions, and land management constraints. Treatment strategies in shrub areas would result in scrub islands. Treatment in forested areas would result in a shaded fuel break, retaining tree canopy and thinning understory branches and vegetation. The shaded fuel break would be constructed using several treatment methods and strategies based upon the prevailing vegetation types, topographic characteristics, environmental considerations, and surrounding land uses. Treatment methods would include hand crews using tools such as chainsaws, pole saws, McLeod's, Pulaski's, weed pullers, and similar handheld equipment. Grazing would be used within forested and scrub landscapes within the treatment polygon. Mechanical removals would be operated from existing roads and would include use of a front loading skid steer masticator, articulating arm masticator, or similar equipment. Work would be completed in a manner that limits disturbance to the ground and remaining vegetation. Treatment Activities by Fuel Type are described in more detail in Section 2.3.

2.2 Treatment Activities

The WUI fuel reduction and shaded fuel break treatment types would be implemented using various treatment "activities" that may be applied singularly or in combination. Per CalVTP PEIR Section 2.5.2, treatment activities are listed as follows:

- **Prescribed Burning:** Includes pile burning (prescribed burning of piles of vegetative material to reduce fuel and/or remove biomass following treatment) and broadcast burning (prescribed burning to reduce fuels over a larger area or restore fire resiliency in target fire adapted plant communities conducted under specific conditions related to fuels, weather, and other variables).
- **Mechanical Treatment:** Use of motorized equipment operated from an existing road to cut, uproot, crush/compact, or chop existing vegetation.
- **Manual Treatment:** Use of hand tools and hand operated power tools to cut, clear, or prune herbaceous or woody species.
- **Prescribed Herbivory:** Use of domestic livestock to reduce a target plant population, thereby reducing fire fuels or competition of desired plant species.
- **Herbicides:** Chemical application designed to inhibit growth of target plant species.



Specific fuel treatment activities vary depending on cover type, condition of vegetation, topography, budget, efficiency, and landowner/manager requirements. A variety of strategies may be used to accomplish the Project's goals and a combination of methods may be used for maximum effectiveness. The primary treatment activities proposed include low intensity prescribed fire, manual treatment, mechanical treatment operated from an existing road, prescribed herbivory, and targeted herbicide application. The overarching strategy for applying treatment activities would follow these guidelines:

- Prioritize removal of remove dead and dying vegetation;
- Prioritize removal of remove invasive plants and noxious weeds;
- Remove target vegetation 6 inches diameter at breast height (DBH) or smaller, prioritizing removal of non-native species over native species;
- Perform selective limbing and thinning of multi-stemmed native trees and large shrubs (e.g., elderberry, hazelnut);
- Selectively mow /cut live native understory species (e.g., snowberry, fern, etc.) to 6 inches or more to allow for regrowth;
- Remove standing dead trees, except those on steep banks or those that would result in soil disturbance;
- Strategically retain native shrub species (e.g., elderberry, manzanita, toyon, coffeeberry) to reduce fuel load while retaining natural woodland structure;
- Strategically retain native tree species (e.g., oak, elderberry, manzanita) to reduce fuel load while retaining natural woodland structure;
- Strategically retain scrub habitat in natural islands for AWS while still creating opportunities for emergency responders to address wildfires; and
- Avoid creating new roads; ensure that mechanical equipment will remain on existing roads.

Treatment activities within each Work Area would vary depending on equipment or personnel access, vegetation type and density, or other factors including landowner permission. It is expected that treatments would vary in intensity depending on site-specific factors and distance from manmade structures. Vegetation removal would generally follow a systematic approach but would also be based on factors related to site-related feasibility, accessibility, and landowner coordination and permission.

2.2.1 Prescribed Burning (Broadcast)

Prescribed low intensity surface fires (broadcast burning) would be used to control vegetation and manage fuel loads. Prescribed understory fires would mimic the periodic low intensity wildfires that were historically prevalent in this area and create similar structural and habitat conditions that benefit many plant and wildlife species. Following initial treatments, prescribed burns would occur approximately every five (5) years, as appropriate for treatment maintenance. Gradual reintroduction of



fire in the area presents an opportunity to improve forest health, reduce critical fuel loading, improve emergency access, and regenerate a healthy ecosystem. In anticipation of completely avoiding AWS and minimizing habitat impacts for this species on the project site, prescribed 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).

Prescribed burning would remain within a predetermined area and would occur only with specific fuels, in safe weather conditions, and would consider other variables. Active burns would follow environmental safety guidelines including burning only under consideration of specific weather conditions (e.g., appropriate humidity, wind direction, etc.) and coordinating with resource agencies such as the California Air Resources Board (CARB). This would include preparation and implementation of a Burn Plan and a smoke management plan. MOFD would report site conditions and request approval to burn through the Prescribed Fire Information Reporting System (PFIRS), which serves as an interface between air quality managers, land management agencies, and individuals that conduct prescribed burning in California.

A prescribed burn smoke management plan (SMP) must be submitted to the Air District at least 30 days prior to burning. The SMP must be approved by the Air District prior to burning. Prescribed burns would typically be ignited using a flamethrower from a side-by-side utility terrain vehicle. Prescribed burns are typically completed in a single day, but under certain circumstances could be maintained for up to 1 week. On average, up to 45 workers are present on site for a prescribed burn. Heavy equipment will be operated from an existing road. Prescribed burns would not occur in AWS habitat.

2.2.2 *Ground-Based Mechanical Treatment*

Mechanical treatments would primarily include skidding, masticating, and chipping and broadcasting target vegetation. Equipment would be operated on roads or skid trails in shaded fuel break and WUI treatment areas, and on flat to moderate slopes. Mechanical treatment activities would occur predominantly on slopes below 40 percent grade, along ridges, and may occur on slopes greater than 40 percent grade with equipment that can reach target vegetation from existing road infrastructure. No mechanical treatment would occur on slopes above 50 percent grade. Ground-based mechanical treatment activities to reduce undesirable wildfire hazards would avoid state or federally jurisdictional waters and riparian habitat by 50 feet minimum.

During typical road-based mechanical treatments, work would require 1 hand crew with up to 20 workers and equipment such as skid steers, excavators, bulldozers and bulldozer transport, tow chippers, track chippers, masticators, and at least 1 fire engine. Mastication/brush mowing would occur with low impact tracked equipment (swing-arm mastication or brush mulcher) or similar equipment. Typical mechanical treatments would require several days to several months to complete, depending on the size of the treatment area, steepness of terrain, and type and density of vegetation.

Consistent with CalVTP PEIR Section 2.5.2, mechanical treatments would cut, uproot, crush/compact, or chop standing and downed vegetation using masticators and other methods. Small-diameter trees



(6 inches DBH or less), downed woody debris, and woody shrubs would be strategically masticated to increase tree spacing and reduce fire fuel loads. Native understory vegetation, brush, and shrubs under the drip lines of trees would be cut and masticated leaving root systems intact for resprouting. Mechanical treatments would not occur within AWS habitat.

2.2.3 Manual Treatment

Ground crews would use hand tools and hand operated power tools, including chainsaws, hand saws, pole saws, McLeods, Pulaskis, weed pullers, brush cutters, and loppers, to cut, clear, and/or prune trees, herbaceous vegetation, and woody shrubs and increase space between trees, per CalVTP PEIR Section 2.5.2. Where feasible, treatments would focus on hand removal of invasive plants and noxious weeds. Within AWS habitat, hand-removal would retain live native vegetation, trim dead branches, and remove invasive weeds. Manual treatments within the Project area would require several days to several months to complete, depending on the size of the treatment area, steepness of terrain, and type and density of vegetation. Manual treatment activities to reduce undesirable wildfire hazards would avoid state or federally jurisdictional waters and riparian habitat by 50 feet minimum.

Manual treatment typically clears 0.3 acre or more per day per crew. Manual treatments typically require 1 or 2 hand crews with a total of 20-40 crew members to be present on site. Four to eight chainsaws are typical, and a drip torch or Terra Torch would be used if pile burning is used to dispose of biomass. Masticators and chippers would be occasionally used on existing roads to assist manual treatments, but they would be avoided in AWS habitat. Where manual treatments are utilized, it may take between 3 and 6 months to complete work, depending on the treatment size and type of vegetation.

2.2.4 Prescribed Herbivory

Prescribed herbivory would be used to reduce fuel loads as pretreatment before other methods and as treatment maintenance. Grazing would require temporary wildlife-safe fencing where natural barriers are not present, temporary water facilities and other infrastructure (e.g., corrals, fences), and guard animals and/or a shepherd to be present on site. Prescribed herbivory involves transporting a herd of grazing animals such as cattle, sheep, or goats to designated prescribed herbivory sites. Stocking rate would vary based on species of grazer (e.g., a herd of cattle would require a larger acreage than a herd of goats of the same size). Livestock would be clean of weed seeds (e.g., hooves, fur, digestive tract, etc.) prior to being introduced to the site. Moving livestock from one grazing ground to another would occur at a frequency based on numerous site-specific factors, including slope, density and type of vegetation, stocking rate, type of livestock, and precipitation/moisture content of vegetation. The relative density or quantity of the vegetation to be removed or modified would aid in determining the number of animals and the length of time necessary to complete the job. Herbivores have the potential to damage other resources if their movement is not controlled. Herds would be moved as often as every one (1) to three (3) days, and one (1) to two (2) workers would be required on average to implement this treatment activity. Any identified sensitive areas would be clearly marked on Project maps, and protection measures would be



communicated to the herder and project manager, including a pre-vegetation removal field visit as appropriate. MOFD's BMPs and CalVTP's SPRs would be incorporated into the prescribed herbivory strategy to mitigate impacts as follows:

- Identify environmentally sensitive areas such as riparian zones, sensitive plants, threatened or endangered animal habitat and archaeological resources, and establish appropriate exclusionary buffer zones around these.
- To prevent introduction of seeds from undesirable plant species to the site, consideration would be given to where animals are coming from and whether viable seeds of undesirable species are present. As necessary, the herd would be fed a weed-free diet for three (3) days prior to being introduced to the grazing site. Any supplemental feed brought on site would be free of noxious weeds.
- Use the highest appropriate stocking density to achieve uniform use of targeted vegetation.
- Post signs warning public of danger of electric fences and unleashed guard dogs when the Project area is open to the public. Discuss public interactions with the on-site herder and grazing project manager.
- Conduct appropriate public outreach so that the public will understand the Project objectives.
- Confirm that the contract grazer has well thought-out animal care procedures and protocols to ensure the animals are cared for in a responsible, humane fashion (e.g., ample stock watering, safety from predators, and careful animal observation and action for sickness or disease).
- Consult with Certified Range Managers when appropriate.
- Develop a monitoring program that determines the effectiveness of the grazing/browsing program compared to the original planned results.

2.2.5 Herbicide Application

Herbicides described in CalVTP PEIR Section 2.5.2 (e.g., glyphosate and species-specific chemicals) would be applied in a focused manner in combination with other strategies. On-the-ground application methods include painting cut stems or stumps and using backpack hand applicators targeted on focal invasive plants. Herbicide application would comply with the US Environmental Protection Agency (EPA) label directions, California Environmental Protection Agency (CalEPA) label standards, and California Department of Pesticide Regulation label standards. All herbicide application would be performed by certified and licensed pesticide applicators in accordance with all local, state, and federal regulations.

Herbicides would be used sparingly and strategically only to control species that increase wildfire hazards. Ground level herbicide application would be implemented by hand or backpack sprayer; no aerial spraying or spraying from trucks would occur. Invasive plants and noxious weeds that cannot be pulled with roots would be cut low to the ground, and herbicide would be applied to each cut stem or



stump typically within 30 minutes of cutting. Hand spraying of stems or leaves of invasive plants would also occur. Herbicide application would not take place within 24 hours of a rain event.

2.2.6 Biomass Disposal

Project debris would typically be processed through natural decomposition (e.g., lopping and scattering, chipping and broadcasting), hauling cut materials to an off-site biomass facility, or pile burning cut materials. The remaining biomass that could not be broadcast on site would be hauled off site or pile burned. No chipped vegetation would be distributed across AWS habitat.

Natural Decomposition

Cut vegetation may be retained on-site to naturally decompose via lopping and scattering or chipping and broadcasting across the landscape. Lopping plants involves cutting a plant low to the ground and distributing the cut material. A road-based masticator or an all-terrain vehicle and tracked towable chipper would be used to process cut vegetative materials. The vegetative material would be fed through the chipper and broadcast into treatment areas. Understory debris chipped and scattered on-site would follow BMPs for reducing the spread of pests, disease, noxious weeds, and invasive species (see Section 2.5). The chipped biomass would be broadcast on-site, except within AWS habitat, with chipped materials cut to under 3 inches in size and spread up to 4 inches in depth to minimize wildfire risk. Chipped vegetation would not be spread in AWS habitat.

Hauling Off Site

Vegetation moved off site would be hauled to the Central Contra Costa Solid Waste Authority or another appropriate biomass processing facility. If invasive plant materials are transported, they would be stored in a sealed container to prevent spreading during transport.

Pile Burning

Cut vegetation would also be piled and burned. Pile size would typically be 4 feet in diameter by 4 feet high, and would not exceed 20 feet in diameter per SPR GEO-6. Suitable treatment areas are open areas away from tree canopies and power lines, and would depend on safety guidelines, including burning only under specific weather conditions (e.g., humidity, wind direction, etc.). Multiple piles would be burned on a single day. Hand cut material would be piled as “feeder piles” with the cut stems facing in one direction in a manner to minimize any overstory scorch when the piles are restacked and burned. Most of the piles would be built in open areas of the forest floor or on the roadside. General operations for pile burning will follow these guidelines:

- Piles should not block vehicle access on any road or trail.
- Piles that are left to dry for later burning would be disassembled and reassembled before burning to ensure that no wildlife is present. Burning should cease and an on-site biologist should be consulted if any wildlife is found in or adjacent to burn piles.



- Piles would be covered with approved, non-toxic, pile burning paper that would be supplied by MOFD. This would help to dry the material and allow piles to be burned during wet weather when fire danger is low.
- Cut material would not be piled or burned within 50 feet of any creek or watercourse.

Pile burning would be conducted in compliance with the local authority having jurisdiction or the CAL FIRE and BAAQMD Regulation 5 for open burning and burn day restrictions. Burns would be coordinated with resource agencies such as the RWQCB and CARB. MOFD would report site conditions and request approval to burn through PFIRS, which serves as an interface between air quality managers, land management agencies, and individuals that conduct prescribed burning in California.

2.3 Treatment Activities by Fuel Type

Traditional fuel reduction methods adopt treatment activities which are typically determined by fuel type. Vegetation types for proposed treatment within the Project footprint are a mosaic of coastal oak woodland, coastal scrub, and annual grasslands. These vegetation types are broadly categorized into three fuel types, consistent with CalVTP PEIR Section 2.4.1:

- Grass fuel type includes California Wildlife Habitat Relationship (CWHR) habitat type: Annual grassland;
- Shrub fuel type includes CWHR habitat type: Coastal scrub; and
- Tree fuel type includes CWHR habitat type: Coastal oak woodland.

Other CWHR vegetation types classified for the Project site include freshwater emergent wetland and lacustrine, which will be avoided with a minimum 50-foot buffer; and barren and urban, which correspond primarily to access roads.

Acreage of each fuel type has been quantified for each Work Area (Table 2); it is important that these acreages are considered estimates when considering the final treatment acreages. Multiple treatment activity strategies will be utilized on each parcel to achieve the shaded fuel break and WUI fuel reduction, and therefore the acreage sum in Table 2 for each treatment type will exceed the actual acreage of each Work Area. Treatment by fuel type is described in more detail in Sections 2.3.1 to 2.3.3.



Table 2. Approximate Acreage of Each Work Area by Treatment Type

Treatment Type	Approximate Acreage by Work Area						Total Acreage
	1	2	3	4	5	6	
Prescribed burning (broadcast)	398.4	0.4	122.5	557.6	55.6	0	1,134.5
Prescribed burning (pile)	Approx. 1 acre total						
Mechanical treatment (on-road masticator with swing-arm attachment)	0.5	4.0	2.4	3.7	2.8	3.2	16.6
Mechanical treatment (chipping)	6.2	7.9	11.4	117.6	36.2	4.7	184.0
Manual treatment	7.8	4.1	10.5	114.9	34.9	1.4	173.6
Prescribed herbivory	396.3	0.3	121.0	556.5	54.1	0	1,128.2
Herbicide application	Spot treatment						

2.3.1 Grassland Fuel Type Treatment Activities

Within non-native grassland (approximately 1,122 acres, 85 percent of the treatment area) in the shaded fuel break and WUI, treatment activities include primarily prescribed herbivory and burn methods to remove grasses, dead woody vegetation, and low lying shrubs and brush to achieve horizontal spacing and reduce overall fuel loading. Mechanical methods would only be employed within the shoulders of existing roads and would not be used within 50 feet of AWS habitat. Low intensity prescribed burning would occur within portions of the shaded fuel break and WUI areas. Prescribed herbivory would also be used in grassland-dominated areas of the shaded fuel break and WUI, particularly in areas of shrub encroachment. Herbicide spot treatment on invasive species and noxious weeds would be applied by hand or targeted by backpack sprayer and not aerially. Prescribed burning and prescribed herbivory would be used within AWS habitat, except where there are landowner restrictions.

Manual hand cutting would use primarily handheld tools. Native shrubs occurring within grassland would be retained or cut back to resprout. Small, isolated trees (6 inches DBH or smaller) growing in the grassland would be cut and piled for burning. Larger trees encroaching on or distributed throughout grasslands would have lower limbs removed to reduce vertical fuel continuity. Broom plants (*Genista monspessulana*, *Spartium junceum*, and *Cytisus scoparius*) or other invasive shrubs and noxious weeds encountered in the grasslands would either be pulled and uprooted or cut low to the ground and treated with herbicide. Cut vegetation would be lopped and scattered, chipped and broadcast, pile burned, or hauled off site.

Prescribed burning in annual grasslands would be treated primarily to reduce the volume of grass and thatch while removing encroaching brush and trees that are overtaking the grassland. Burning would be timed to control invasive non-native grasses where present. Perimeter fire lines would include existing roads and natural features where possible to maintain aesthetic values. Prescribed fires would be conducted in conditions promoting a light to moderate burn (i.e., when soil and duff are moist), in order to increase the productivity of the habitat without resulting in adverse impacts to wildlife. All prescribed burning (both broadcast and pile burns) would be done under applicable burn and air quality permits to



minimize potential environmental impacts. 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).

2.3.2 Shrub Fuel Type Treatment Activities

Within coastal scrub (approximately 67 acres, 5 percent of the treatment areas) of the shaded fuel break and WUI, treatment activities would involve primarily manual thinning to remove dead woody vegetation and invasive species to achieve horizontal spacing. Coastal scrub would be reduced in a way that retains suitable scrub habitat for AWS. Prescribed herbivory would be used in some areas with interspersed grasses. Herbicide spot treatment of invasive species and noxious weeds would be hand applied. Mechanical methods would only be employed within the shoulders of existing roads and 50 feet or more from AWS habitat. Only handheld tools would be used in AWS scrub habitat. Broom plants or other invasive shrubs and noxious weeds would either be uprooted and pulled or cut low to the ground and spot treated with herbicide. Small encroaching trees (under 6 inches DBH) may be removed, and limbs would be removed from larger trees up to 6 feet, as appropriate. Cut vegetation would be lopped and scattered, chipped and broadcast, pile burned, or hauled off site. Chipped vegetation would not be broadcast in AWS habitat.

Coastal scrub would be reduced in a way that retains suitable scrub habitat for AWS. Suitable scrub habitat is described as shrub communities with a mosaic of open and closed canopy patches. The US Fish and Wildlife Service (USFWS) defines scrub as coastal scrub, coyote brush scrub, or maritime chaparral areas > 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 (Federal Emergency Management Agency [FEMA] 2013). Shrub islands would be created through mosaic thinning or patch retention thinning resulting in a total canopy cover of between 30 and 50 percent shrubs and 50 to 70 percent grassy openings (FEMA 2013). Islands would model naturally occurring scrub and would include variable age classes.

When work is occurring within scrub habitat areas, the crew would work closely with a qualified biologist to selectively remove scrub in a way that retains these dimensions, and therefore retains the overall habitat function while still serving the needs of the shaded fuel break. This technique has been used on previous projects (FEMA 2013) and aims to provide a “scrub mosaic” that retains AWS habitat function. Scrub mosaic recommendations would vary depending on site conditions. The following techniques would be implemented during treatment:

- Vegetation removal would occur in irregular, oblong shapes to maintain a natural condition.
- Vegetation removal would avoid rocky outcrops.
- The overall dominant habitat type would not be converted.
- Vegetation removal would focus on dead, woody vegetation, and invasive species.



Broom plants or other invasive shrubs and noxious weeds would either be uprooted and pulled or cut low to the ground and spot treated with herbicide. Small encroaching trees (under 6 inches DBH) may be removed, and limbs would be removed from larger trees up to six 6 feet, as appropriate. Cut vegetation would be lopped and scattered, chipped and broadcast, pile burned, or hauled off site.

2.3.3 Tree Fuel Type Treatment Activities

The tree dominated portions of the Project would be designed to prevent fire from approaching or departing the shaded fuel break and from laddering into the tree canopy and would promote establishment of native trees. This shaded fuel break would provide firefighters an opportunity to access lower intensity ground fires should they occur. Within all forest fuel types (approximately 120 acres, 9 percent of the treatment areas) in both the shaded fuel break and the WUI, vegetation would be treated primarily with manual and mechanical tools to remove and thin understory shrubs and brush, as well as dead and dying trees and small (less than 6 inches DBH) non-native, invasive trees. To achieve desired fuel reduction, invasive species and noxious weeds would be removed first followed by fire prone native species such as oak (*Quercus* spp.), pine (*Pinus* spp.), coffee berry (*Frangula* spp.), sage (*Artemisia* spp.), etc. Herbicide spot treatment of invasive species and noxious weeds would be applied by hand. Mechanical methods would only be employed within the shoulders of existing roads; equipment would remain on existing road and mechanical treatments would not occur within 50 feet of AWS habitat. Tree canopy over roads would be removed up to 15 feet from the ground to facilitate passage of emergency vehicles during a fire event. Only handheld tools would be used in and adjacent to AWS habitat.

In tree-dominated landscape areas, work would be conducted to preserve the natural appearance. A shaded fuel break retains live canopy that provides shade over a fuel break. Lower tree limbs would be pruned, and most ground vegetation would be removed to break up the horizontal and vertical continuity of flammable vegetation. Dead and dying trees in the overstory would be removed where necessary. No commercial forest products would be removed. Canopy shade would slow future growth of many grass and brush species and assist in future maintenance efforts. Where chipper access is not practical, cut material would be piled strategically for later burning. General guidelines include:

- Larger trees (greater than 6 inches DBH) would be limbed up to about 6 feet.
- Small trees and brush (less than 6 inches DBH) would be removed strategically for invasive species and retain native vegetation; stumps would be cut within 4 inches of bare mineral soil.
- Small trees in open areas that have the potential to provide shade and reduce invasive plant species would be limbed up to +/- 6 feet and the canopy left intact.
- Hazardous trees (e.g., dead or dying trees) identified by a Registered Professional Arborist or qualified fire professional would be removed.
- Healthy, mature native trees would be left in place unless they present structural or health defects that place infrastructure or lives at risk or densities that pose a fire hazard risk.



- Broom plants would be pulled primarily; where pulling is not possible, individual plants will be cut low to the ground and herbicide will be applied by hand to the stump within 30 minutes to prevent regrowth. The MOFD would provide brush pullers as requested by the crew/contractor. Broom would not be chipped and would be hauled off-site to a proper disposal facility.
- Poison oak would be cut in place and left where cut (lop and scatter) no longer than 24 inches.
- Resprouting redwood stumps from previous treatments should be thinned to one healthy sprout per stump. The remaining material should be added to the piles for burning when the Project area is in prescription.
- Non-native invasive woody vegetation that cannot be pulled would be cut to approximately two (2) inches high and manually treated with herbicide within half an hour to prevent resprouting.
- Cut vegetation would be lopped and scattered, chipped and broadcast, pile burned, or hauled off site.
- Along existing access roads, tree canopy over the road would be trimmed up to 15 feet across the road and 3 feet beyond.

Native trees would be strategically retained in forested areas with 25-50 feet of space between crowns, where the tree crown is approximately 10-15 feet wide. Spacing may be closer than 25 feet on level ground as needed, and greater than 50 feet on steeper ground to mitigate wildfire behavior or near structures for structure protection.

2.3.4 Riparian Areas

Vegetation removal activities will avoid riparian habitats by a standard minimum 50-foot buffer, but buffers could 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. Pile burning would occur at least 50 feet away from waterways and debris should not be allowed to enter waterways. Refueling of equipment must occur outside riparian buffers and would be performed using containment to mitigate the risk of spills.

2.3.5 Land Managed by Wildlife Heritage Foundation

Properties under the management of Wildlife Heritage Foundation (WHF) (approximately 227 acres, 17 percent of the treatment areas) follow pre-existing Long-Term Management Plans (LTMPs) as part of conservation easement agreements. Treatment activities on WHF-managed lands would be consistent with the governing documents. Work would primarily be along roadsides using handheld tools to remove vegetation and limb up trees. Removal of biomass would include chipping, hauling away, and pile burning. Relevant Conservation Easements and LTMPs for WHF-managed lands are:



- Conservation Easement Deed: Eastern Hills Open Space Area, Quarry Hill Open Space Area and Development Buffer Area, Montanera Project, Gateway Valley, Orinda, Contra Costa County, California (June 12, 2006)
- LTMP for the Montanera Project: Eastern Hills Open Space Area, Quarry Hill Open Space Area, Development Buffer Area. Prepared for Orinda Gateway, LLC. Prepared by WRA, Inc. (June 27, 2006)
- Final Resource Management Plan for the Montanera Project. Prepared for Orinda Gateway, LLC. Prepared by WRA, Inc. (April 21, 2006, Final Conforming Changes June 23, 2006)
- Conservation Easement Deed: Moraga Creek Open Space Extension Area and Upper San Leandro Watershed Open Space Area, Contra Costa County, California. (February 9, 2007)
- Conservation Easement Deed: Moraga Creek Open Space Area and Indian Valley Preserve Area, Montanera Project, Gateway Valley, Orinda, Contra Costa County, California (June 12, 2006)
- Conservation Easement Deed: Western Hills Open Space Area, Montanera Project, Gateway Valley, Orinda, Contra Costa County, California. (June 19, 2006)
- LTMP for the Montanera Project: Western Hills Open Space Area. Prepared for Orinda Gateway, LLC. Prepared by WRA, Inc. (June 27, 2006)
- Management Plan for the Moraga Creek Open Space Extension Area and Upper San Leandro Watershed Open Space Area (October 24, 2006)
- LTMP for the Montanera Project: Moraga Creek Open Space Area and Indian Valley Preserve Area. Prepared for Orinda Gateway, LLC. Prepared by WRA, Inc. (June 27, 2006)
- Conservation Easement Deed: Faria Preserve and Leona Heights Preserve (October 31, 2019)
- Long-Term Resource Management Plan: The Roberts Ranch Preserve, Contra Costa County, California. Prepared for Faria LT Ventures, LLC. Prepared by Olberding Environmental, Inc. (August 2015)
- Long-Term Resource Management Plan for the Roberts Ranch Preserve and 4-Acre Leona Heights Mitigation Area, Contra Costa County, California. Prepared by Dr. Collin Mbanugo. Prepared by Olberding Environmental, Inc. (August 2015, Amended May 2016 for the Leona Heights Sulfur Mine Remediation and Creek Restoration Project)

2.4 General

2.4.1 Workers

MOFD, Contra Costa Fire, CAL FIRE crews, and/or subcontractors would conduct all treatment activities. Crew sizes would vary and would typically be fewer than 25 workers per site, per day. Multiple crews would work at the same time.



2.4.2 Site Access

Treatment areas would be accessed via existing fire roads and trails. No new roads or access points would be created. Private residences would be used as access points, contingent on the landowner’s consent. Vehicles and equipment would be staged at the contractor’s yard daily or on site with landowner consent.

2.4.3 Treatment Schedule and Duration

All treatments, except herbivory, would occur primarily on weekdays between 7:00 am and 7:00 pm, and during daylight hours only. During prescribed burning, crews would need to conduct some maintenance burning on weekends to manage overall smoke impacts. Noise generating treatments would comply with the local regulations outlined in Table 3 and in Section 4.12, in Impact NOI-1.

Table 3. Relevant Local Jurisdiction Noise Restrictions

Jurisdictional Noise Restriction	Restrictions
Contra Costa County Noise Element	Construction activities shall be concentrated during the hours of the day that are not noise sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods.
City of Orinda Noise Ordinance	Construction activities and use of power equipment for yard maintenance may occur weekdays between 8 a.m. and 6:00 p.m. and Saturdays between 10 a.m. and 5 p.m.
Town of Moraga Noise Ordinance	It is unlawful except in case of emergency work for a person within a residential zone or within a radius of five hundred (500) feet of one to operate equipment or perform outside construction or repair work on a building, structure or project, or to operate a pile driver, power shovel, pneumatic hammer, derrick, power hoist or other construction type device (between the hours of five p.m. of one day and eight a.m. of the next day) in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance. It is unlawful for a person to operate machinery, equipment, pump, fan, air conditioning apparatus or similar mechanical device which disturbs the peace, quiet and comfort of neighboring residents or a reasonable person of normal sensitiveness residing in the area in the quiet and peaceful enjoyment of his property.

The MOFD would begin implementation of vegetation removal as soon as July 2023. The work is anticipated to be completed by March 2025.

2.5 Pests, Diseases, and Invasive Species

Without proper prevention, Project treatments have potential to spread pathogens, diseases, pests, or invasive species. Sudden Oak Death (SOD) (*Phytophthora ramorum*), pitch canker (*Fusarium circunatum*), French broom (*Genista monspessulana*), and snake fungal disease (*Ophidiomyces ophiodiicola*) occur in the region and have potential to spread in the Project area, from one Work Area to another, or from the Project area to off-site areas. To prevent the spread of these and other problematic biota, instructions described in CalVTP PEIR SPR BIO-9 would be carefully followed during all phases of Project implementation, including treatment maintenance.



2.5.1 Sudden Oak Death

SOD infects coastal forests throughout California and Oregon and kills susceptible species including valley oak (*Quercus lobata*), coast live oak (*Quercus agrifolia*), California black oak (*Quercus kelloggii*), canyon live oak (*Quercus chrysolepis*), and madrone (*Arbutus menziesii*) saplings. Host species that are in the treatment area include California bay laurel (*Umbellularia californica*) and coast redwood (*Sequoia sempervirens*). In addition to applicable CalVTP SPRs and MMs that would be implemented, and to avoid the spread of this pathogen, all hand equipment and boots worn by treatment crews would be sanitized and heavy equipment hosed off prior to operations in areas where the spread of SOD is possible. The California Oak Mortality Task Force offers additional information regarding treatment and disposal measures for plants infected with SOD, which would be monitored for changes in SOD treatment recommendations (California Oak Mortality Task Force 2023).

2.5.2 Pitch Canker

The fungal disease commonly referred to as pitch canker affects many pine species and can infect Monterey pine (*Pinus radiata*). Most California native pines are susceptible to pitch canker, but Monterey pine is the most widely affected host. In addition to applicable CalVTP SPRs and MMs that would be implemented, and to avoid the spread of this pathogen, the same measures described above to prevent the spread of SOD would be implemented. The Pitch Canker Task Force offers additional information regarding treatment and guidelines for handling woody material infected by pitch canker fungus, which would be monitored for recommendation changes (Pitch Canker Task Force 2023).

2.5.3 French Broom

The goal of reducing invasive plant species within the Project area is in conformity with the overall Project goals of fuels reduction and wildfire prevention. Invasive plants can be spread when crews and equipment travel between sites, transporting soil and mud contaminated with seeds. Whenever possible, crews and equipment would remain on paved, rocked, and well traveled trails and would 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 would ensure that no erosion occurs, and no waterways are contaminated. Broom species are common invasive plants in Project areas and are classified as noxious weeds by the California Invasive Plant Council (Cal-IPC). They are aggressive species whose seeds are easily spread by Project activities. No species of broom should be chip cut; instead, it should be hand pulled whenever possible. When working in areas with broom, crews should ensure equipment is cleaned of all soil, mud, and debris before departing the site.

French broom is a particularly ignitable invasive species. It is known for its ability to shade out seedlings, replace native plant species, and carry fire into tree canopies. This species creates a large seed bank and readily resprouts from the root after cutting, freezing, or fire (Cal-IPC 2020). Cal-IPC recommends pulling French broom to remove the entire plant, including its roots, to eliminate opportunity for resprouting.



Removal of French broom is a priority, as the species presents increased fire hazard, a robust seedbank, and adverse impacts to habitat and aesthetics. Additional information about French broom control and treatments is located on the Cal-IPC website, which would be monitored for changes in French broom treatment recommendations (Cal-IPC 2020).

2.5.4 Snake Fungal Disease

Snake fungal disease comes from a fungus that lives in the soil. This disease causes face abnormalities, scabs, abnormal molting, and other issues as the fungus consumes keratin in the scales (Thompson et al. 2018). Symptoms are typically mild but can be fatal, as they may prevent snakes from locating and consuming prey. Snakes, such as the federal and state threatened AWS, are susceptible to this disease. Spread of the fungus to new locations may occur when people track contaminated soil embedded in clothing, shoes, or equipment. In addition to applicable CalVTP SPRs and MMs, the measures described to prevent spread of SOD would be implemented.

2.6 Treatment Maintenance

All Work Areas would be monitored for maintenance of desired vegetation conditions (“treatment maintenance,” per CalVTP PEIR Section 2.5.2). Qualified personnel would monitor vegetative conditions to determine need for treatment maintenance. In forested areas, treatment maintenance may occur every 3 to 5 years. In brush dominated areas, treatment maintenance such as herbivory may occur every 1 to 5 years. In grassland areas or areas where initial treatments were primarily manual, treatment maintenance may occur annually. Treatment maintenance would typically be implemented between approximately August and January whenever feasible, during AWS hibernation and outside of nesting bird season; 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).

Maintenance treatments are anticipated to follow the same methods as initial treatments but are subject to change depending on site response to initial treatment. At locations where intensive vegetation removal (e.g., prescribed burning) occurred, treatment maintenance may utilize more low intensity manual treatment activities in subsequent years. Because vegetation communities are dynamic, treatment activities would be modified to reflect changes.

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



3.0 ENVIRONMENTAL CHECKLIST

VEGETATION TREATMENT PROJECT INFORMATION

1. **Project Title:** Tunnel East Bay Hills Shaded Fuel Break
2. **CalVTP ID Number:** 2023-22
3. **Project Proponent's Name and Address:** Moraga-Orinda Fire District
1280 Moraga Way
Moraga, CA 94556
4. **Contact Person Information and Phone Number:** Jeff Isaacs, Fire Marshal
(925) 258-4513
jisaacs@mofd.org
5. **Project Location:** Contra Costa County: Wilder, Lost Valley, Canyon, Valle Vista, Larch, Bollinger Canyon, Rheem Valley, and other communities
10 S, 576435.18 m E, 4188152.05 m N
(Figures 1a and 1b)
6. **Total Area to Be Treated (acres)** 1,320 acres
7. **Description of Project:**

The proposed Project would involve conducting fuel reduction vegetation management activities within six (6) Work Areas totaling 1,320 acres. See Section 2 for expanded Project Description.

a. Initial Treatment

See Section 2 for expanded Project Description.

Treatment Types

- Wildland-Urban Interface Fuel Reduction
- Fuel Break (Shaded)
- Ecological Restoration

Treatment Activities

Multiple strategies will be utilized to achieve the shaded fuel break and WUI fuel reduction, and therefore the acreage sum below will exceed the actual acreage of the Project area.

- Prescribed Burning (Broadcast), approximately 1,134 acres
- Prescribed Burning (Pile Burning), approximately 1 acre
- Mechanical Treatment, approximately 17 acres, roadside only and outside of Alameda whipsnake habitat
- Manual Treatment, approximately 174 acres
- Prescribed Herbivory, approximately 1,128 acres
- Herbicide Application, approximately 0.1 acre

Fuel Type

- Grass Fuel Type
- Shrub Fuel Type



Tree Fuel Type

b. Treatment Maintenance

Per Section 2.6: Treatment Maintenance, maintenance treatments are anticipated to follow the same methods as initial treatments but are subject to change depending on site response to initial treatment.

Treatment Types

- Wildland-Urban Interface Fuel Reduction
- Fuel Break (Shaded)
- Ecological Restoration

Treatment Activities

Multiple strategies will be utilized to achieve the shaded fuel break and WUI fuel reduction, and therefore the acreage sum below will exceed the actual acreage of the Project area.

- Prescribed Burning (Broadcast), TBD
- Prescribed Burning (Pile Burning), TBD
- Mechanical Treatment, TBD
- Manual Treatment, TBD
- Prescribed Herbivory, TBD
- Herbicide Application, TBD

Fuel Type

- Grass Fuel Type
- Shrub Fuel Type
- Tree Fuel Type

8. Regional Setting and Surrounding Land Uses:

The proposed Project would create and maintain a reduced fuel zone in the San Francisco East Bay within MOFD's service area around the Contra Costa County communities south of the Grove Shafter Freeway (Highway 24). **The area includes land owned and/or managed by private landowners. Communities included within the MOFD's southern shaded fuel break and WUI fuel reduction are the Cities of Orinda, the Town of Moraga, and the unincorporated communities of Canyon, Eastport, and Valle Vista. The Project layout is generally a horseshoe pattern starting from Wilder and Highway 24, extending south and around Rancho Laguna Park, then extending north through Bollinger Canyon, and ending south of Lafayette.** The six Work Areas are each separated into smaller segments and are described in more detail in Section 1. While each of the six Work Areas contain portions of the CalVTP treatable landscape, each includes areas that are outside of the treatable landscape. For example, the Rheem Valley area (the northern portion of Work Area 4) does not heavily overlap the treatable landscape and portions of it are located more than 1 mile from the nearest treatable landscape. The southern portion of the Rheem Valley area is located immediately adjacent to the treatable landscape. **Non-residential areas include undeveloped rolling hills and open space managed by public and private entities, the Upper San Leandro Reservoir, and areas of scattered vineyards and infrastructure such as transmission lines and power stations. Most of the Project area watershed is critical for domestic water supply reservoirs, provides habitat for numerous special-status species, and is very popular recreational land. The more urbanized portions transition into rural residential neighborhoods with well-established native and non-native vegetation. Several major PG&E transmission lines and substations are located in and around the Project vicinity to supply electrical power for the local**



communities. Numerous commercial and public safety telecommunications facilities that serve the entire San Francisco Bay Area are located on the ridgeline west of Orinda.

9. Other Public Agencies Whose Approval Is Potentially Required: (e.g., permits)

- Pesticide application permit from Contra Costa County Agricultural Commissioner
- Smoke management plan from BAAQMD
- Burn permit from BAAQMD
- Burn permit from CAL FIRE
- Waste discharge requirement from the San Francisco RWQCB
- Encroachment permits from local public works departments
- Informal consultation with CDFW
- Informal consultation with USFWS

Coastal Act Compliance

- The proposed Project is NOT within the Coastal Zone
- The proposed Project is within the Coastal Zone (*check one of the following boxes*)
- A coastal development permit has been applied for or obtained from the local Coastal Commission district office or local government with a certified Local Coastal Plan, as applicable.
 - The local Coastal Commission district office or local government with a certified Local Coastal Plan (in consultation with the local Coastal Commission district office) has determined that a coastal development permit is not required.

10. Native American Consultation:

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

Pursuant to CalVTP SPR CUL-2, an updated Native American contact list and sacred lands file search was obtained from the Native American Heritage Commission (NAHC). The sacred lands data file indicated no sacred sites occur within the Project area or adjacent lands. On November 15, 2022, letters were sent via certified mail to each of the 16 Tribal contacts provide by the NAHC that requested any additional information regarding Tribal resources and to notify MOFD if they wished to initiate consultation regarding the Project actions. Tribes contacted included Amah Mutsun Tribal Band of Mission San Juan Bautista, Chicken Ranch Rancheria of Me-Wuk Indians, Guidiville Indian Rancheria, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the San Francisco Bay Area, Nashville Enterprise Miwok-Maidu-Nishinam Tribe, North Valley Yokuts Tribe, The Ohlone Indian Tribe, Wilton Rancheria, Wuksache Indian Tribe/Eshom Valley Band, and the Confederated Villages of Lisjan Nation. To date, one response has been received from Corrina Gould, of the Confederated Villages of Lisjan Nation, who requested further consultation regarding the Project. As planning proceeds, MOFD would continue to consult with interested Tribal representatives regarding the Project and incorporate their concerns into Project planning and mitigation as warranted.



DETERMINATION

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

- I find that all of the effects of the proposed project (a) have been covered in the CalVTP PEIR, and (b) all applicable Standard Project Requirements and mitigation measures identified in the CalVTP PEIR will be implemented. The proposed Project is, therefore, **WITHIN THE SCOPE** of the CalVTP PEIR. **NO ADDITIONAL CEQA DOCUMENTATION** is required.
- I find that the proposed project will have effects that were not covered in the CalVTP PEIR. These effects are less than significant without any mitigation beyond what is already required pursuant to the CalVTP PEIR. A **NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project will have effects that were not covered in the CalVTP PEIR or will have effects that are substantially more severe than those covered in the CalVTP PEIR. Although these effects may be significant in the absence of additional mitigation beyond the CalVTP PEIR's measures, revisions to the proposed project or additional mitigation measures have been agreed to by the project proponent that would avoid or reduce the effects so that clearly no significant effects would occur. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project will have significant environmental effects that are (a) new and were not covered in the CalVTP PEIR and/or (b) substantially more severe than those covered in the CalVTP PEIR. Because one or more effects may be significant and cannot be clearly mitigated to less than significant, an **ENVIRONMENTAL IMPACT REPORT** will be prepared.

Dave Winnacker

7/14/2023

Signature

Date

Dave Winnacker

Fire Chief

Printed Name

Title

Moraga-Orinda Fire District

Agency



4.0 PROJECT-SPECIFIC ANALYSIS AND ADDENDUM

4.1 Aesthetics and Visual Resources

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact AES-1: Result in Short-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from Treatment Activities	LTS	Impact AES-1, pp. 3.2-16–3.2-19	Yes	AES-2, AQ-2, AQ-3, REC-1	NA	LTS	No	Yes
Impact AES-2: Result in Long-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from Wildland Urban Interface Fuel Reduction, Ecological Restoration, or Shaded Fuel Break Treatment Types	LTS	Impact AES-2, pp. 3.2-20–3.2-25	Yes	AD-4, REC-1, AES-1, AES-2, AES-3	NA	LTS	No	Yes
Impact AES-3: Result in Long-Term Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from the Nonshaded Fuel Break Treatment Type	SU	Impact AES-3, pp. 3.2-25–3.2-27	No	NA	None	NA	NA	NA
¹ NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.								
New Aesthetic and Visual Resource Impacts: Would the treatment result in other impacts to aesthetics and visual resources that are not evaluated in the CalVTP PEIR?				<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		If yes, complete row(s) below and discussion		
				Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant		
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

4.1.1 Discussion

Impact AES-1

The Project would involve manual treatment; ground based mechanical treatment, including mastication, chipping, and broadcasting, prescribed herbivory, pile burning, prescribed (broadcast) burning, and targeted herbicide use; and biomass disposal, including lopping and scattering, hauling off



site, and pile burning. The potential for these treatment activities to result in short term degradation of visual character was examined in the PEIR and found to be less than significant.

Portions of the treatment area, mainly Work Area 3, would be visible from State Route (SR) 24, which is an officially designated state scenic highway (California Department of Transportation 2018). Additionally, the proposed treatments would occur within privately and publicly owned open space areas that contain public hiking trails that pass through or in close proximity to the treatment areas. Several roads in the vicinity of the treatment areas are locally designated as scenic corridors or routes, including St. Mary's Road, Canyon Road, Moraga Way, Moraga Road, Rheem Boulevard, Camino Pablo, and Bollinger Canyon Road (Contra Costa County 2005, Town of Moraga 2002, City of Orinda 1987). Portions of the treatment area would be visible from several of these roadways. The visual character in the vicinity of the treatment areas is characterized as recreational areas dominated by grass, shrubs, or trees, as well as residential areas. Viewers in the vicinity of the treatment areas would be mostly residents or recreationalists on existing trails that overlook or are adjacent to the treatment areas, as well as motorists.

Consistent with the PEIR, the presence of large equipment could contrast with the natural environment where publicly visible, such as adjacent to a public trail or roadway. However, a treatment and its visibility would be temporary and would not dominate a view or block any views from scenic vistas or state scenic highways. Smoke from prescribed burning could also be visible from public viewpoints and SR 24. These activities also would not substantially degrade the existing visual character or quality of an area given that the treatment activities would be limited in geographic extent. The potential for the Project to result in short term substantial degradation of the visual character of the Project area is within the scope of the PEIR because the proposed treatment activities and types of equipment proposed for use are consistent with those analyzed in the PEIR. SPRs applicable to the proposed treatments are AES-2, AQ-2, AQ-3, and REC-1, which require that treatment-related equipment be stored outside of the public viewshed, submittal of a Smoke Management Plan if the prescribed burning triggers the threshold (17 CCR Section 80160), creation of a Burn Plan, and that recreational users be notified of any temporary recreation area closures.

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

Impact AES-2

Initial and maintenance treatments would include shaded fuel break and WUI fuel reduction treatment types. The potential for these treatment types to result in long term degradation of the visual character of an area was examined in the PEIR and found to be less than significant. Treatments would occur on both public and private lands. Removal of dead or dying vegetation and hazard trees, thinning of shrub



dominated areas, and prescribed burning would result in a change in views. The shaded fuel break treatment would retain canopy cover and retain trees larger than 6 inches DBH while limbing up larger trees to 6 feet. Shrub-dominated areas would be thinned through mosaic thinning or patch retention thinning, creating shrub islands approximately 50 feet in diameter and spaced 50 feet apart, with grassy openings between the islands. Islands would model naturally occurring scrub and would include variable age classes. These methods would largely preserve the natural appearance. Therefore, these treatments would not substantially affect views.

As described in the PEIR, prescribed burning would result in grasses temporarily changing color from green or brown to a dark gray/black. Grass would regrow during the following winter, so this adverse change would be temporary and short in duration. Additionally, prescribed burning and wildfires occur in this area under existing conditions, so similar burned vegetation is already visible in the vicinity of the treatment areas. Finally, the proposed project would be designed to create a landscape appearance closer to native conditions and could therefore result in long-term beneficial visual impacts.

As described in Impact AES-1, portions of the treatment area are visible from SR 24, a state scenic highway, as well as locally designated scenic corridors/routes. Public hiking trails are also present within and adjacent to the treatment areas. The aesthetic impacts would be temporary and short term, and the natural characteristics of the treatment areas would remain following treatment. SPRs applicable to the proposed treatments are SPRs AES-1, AES-2, and AES-3, and REC-1, which require that treatment-related equipment be stored outside of the public viewshed, treatment area edges are feathered to create a natural transitional appearance, vegetation screening is provided within and adjacent to treatment areas, and recreational users be notified of any temporary recreation area closures. The potential for the Project to result in long term substantial degradation of the visual character of the Project area is within the scope of the PEIR because the proposed treatment activities are consistent with those analyzed in the PEIR.

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

Impact AES-3

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

New Aesthetic and Visual Resource Impacts

The proposed treatments are consistent with the treatment types and activities covered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable environmental and regulatory conditions



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



4.2 Agriculture and Forestry Resources

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact AG-1: Directly Result in the Loss of Forest Land or Conversion of Forest Land to a Non-Forest Use or Involve Other Changes in the Existing Environment Which, Due to Their Location or Nature, Could Result in Conversion of Forest Land to Non-Forest Use	LTS	Impact AG-1, pp. 3.3-7–3.3-8	Yes	NA	NA	LTS	No	Yes
<small>¹NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.</small>								
New Agriculture and Forestry Resource Impacts: Would the treatment result in other impacts to agriculture and forestry resources that are not evaluated in the CalVTP PEIR?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion		
				Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant		
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

4.2.1 Discussion

Impact AG-1

The proposed Project would involve manual treatment; ground based mechanical treatment including mastication, chipping, and broadcasting, prescribed herbivory, pile burning, prescribed (broadcast) burning, and targeted herbicide use; and biomass disposal including lopping and scattering, hauling off-site, and pile burning. The vegetation communities in the Project area include annual grasslands, coastal scrub, chaparral, and coastal oak woodland. There is no farmland within the Project area. The potential for the proposed treatment to result in the loss of forest land was examined in the PEIR and found to be less than significant. Potential impacts resulting in the conversion of forest land are within the scope of the PEIR because the treatment activities are consistent with those addressed in the PEIR. The majority of vegetation within the treatment area is comprised of grassland and shrub dominated communities, not woodlands or forested communities. However, creation of the shaded fuel break would remove understory vegetation, remove hazard trees, and prune low limbs of trees within coastal oak woodland. Tree cover within woodlands and forested areas remaining after treatment would be consistent with the definition of forest land used in PRC 12220(g): land that can support 10 percent native tree cover of any species under natural conditions. The proposed Project would not remove trees for commercial purposes and would not result in conversion of the dominant vegetation types, therefore the proposed



project would not result in loss of forest land or conversion of forest land to non-forest use. This impact is within the scope of the PEIR because the treatment activities and intensity are consistent with those analyzed in the PEIR.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. Within the Project area, existing conditions within forested land are essentially the same within and outside of the treatable landscape. Therefore, the impact to forested land is also the same. No Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is present within the Project area (California Department of Conservation 2022); therefore, no conversion of farmland would occur. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Agriculture and Forestry Resource Impacts

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



4.3 Air Quality

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact AQ-1: Generate Emissions of Criteria Air Pollutants and Precursors During Treatment Activities that would exceed CAAQS or NAAQS	PSU	Table 3.4-1; Impact AQ-1, pp. 3.4-26–3.4-32; Appendix AQ-1	Yes	AD-1, AD-4, AQ-1 through AQ-4, AQ-6	None	SU	No	Yes
Impact AQ-2: Expose People to Diesel Particulate Matter Emissions and Related Health Risk	LTS	Table 3.4-6; Impact AQ-2 pp. 3.4-33–3.4-34; Appendix AQ-1	Yes	AQ-1, HAZ-1, NOI-4, NOI-5	NA	LTS	No	Yes
Impact AQ-3: Expose People to Fugitive Dust Emissions Containing Naturally Occurring Asbestos and Related Health Risk	LTS	Section 3.4.2; Impact AQ-3, pp. 3.4-34–3.4-35	No	None	NA	No Impact	No	Yes
Impact AQ-4: Expose People to Toxic Air Contaminants Emitted by Prescribed Burns and Related Health Risk	PSU	Section 3.4.2; Impact AQ-4, pp. 3.4-35–3.4-37	Yes	AD-4, AQ-1, AQ-2, AQ-3, AQ-6	NA (no feasible mitigation available)	SU	No	Yes
Impact AQ-5: Expose People to Objectionable Odors from Diesel Exhaust	LTS	Impact AQ-5, pp. 3.4-37–3.4-38	Yes	HAZ-1, NOI-4, NOI-5	NA	LTS	No	Yes
Impact AQ-6: Expose People to Objectionable Odors from Smoke During Prescribed Burning	PSU	Section 2.5.2; Impact AQ-6; pp. 3.4-38	Yes	AD-4, AQ-1, AQ-2, AQ-3, AQ-6	NA (no feasible mitigation available)	SU	No	Yes

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

New Air Quality Impacts: Would the treatment result in other impacts to air quality that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion
	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3.1 Discussion

Impact AQ-1

The use of vehicles, mechanical equipment, prescribed herbivory, herbicides, and prescribed burning during initial and maintenance treatments would result in emissions of criteria pollutants that could exceed California ambient air quality standard (CAAQS) or national ambient air quality standard (NAAQS)



thresholds for the San Francisco Bay Area Air Basin. The potential for emissions of criteria pollutants to exceed CAAQS or NAAQS thresholds was examined in the PEIR and was found to be potentially significant. Emissions of criteria air pollutants related to the proposed treatment are within the scope of the PEIR because the associated equipment and duration of use are consistent with those analyzed in the PEIR.

The SPRs applicable to this treatment project are AD-1, AD-4, AQ-1 through AQ-4, and AQ-6, which require public notification for prescribed burning, compliance with applicable BAAQMD air quality requirements, submittal of a Smoke Management Plan and Burn Plan if the prescribed burning triggers the threshold (17 CCR Section 80160), minimizing dust, and following all safety procedures required of a CAL FIRE crew. SPR AQ-5 would not apply because no naturally occurring asbestos, ultramafic rock outcrops, or former asbestos mines are mapped in or near the treatment area. Emission reduction techniques included in MM AQ-1 would be infeasible for the project proponent to implement. It is cost prohibitive to use equipment meeting the latest efficiency standards, including meeting the EPA's Tier 4 emission standards, using renewable diesel fuel, using electric- and gasoline-powered equipment, and using equipment with Best Available Control Technology. In addition, crew sizes would be small and may not all be employed with the same company. Therefore, carpooling may not be feasible to implement for most of the workers. Therefore, this impact would remain significant and unavoidable.

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

Impact AQ-2

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

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. While each of the six Work Areas contain portions of the CalVTP treatable landscape, the Rheem Valley work area (the northern portion of Work Area 4), doesn't heavily overlap the treatable landscape and portions of it are located over a



mile from the nearest treatable landscape. However, within the boundary of the project area, the air quality conditions and types of sensitive receptors (i.e., exposure potential) present in the areas outside the treatable landscape are essentially the same as those within or adjacent to the treatable landscape; therefore, the air quality impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact AQ-3

This impact does not apply to the treatment Project, because no naturally occurring asbestos, ultramafic rock outcrops, serpentine soils, or former asbestos mines are mapped in or near the treatment area (McCarten 1993, USGS 2017, and USGS 2022).

Impact AQ-4

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

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

Impact AQ-5

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



The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. As described in Impact AQ-1, the Rheem Valley work area (the northern portion of Work Area 4), does not heavily overlap the treatable landscape and it is further from the treatable landscape than other maintenance areas. However, within the boundary of the project area, the air quality conditions and types of sensitive receptors present in the areas outside the treatable landscape are essentially the same as those within, or adjacent to, the treatable landscape; therefore, the air quality impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact AQ-6

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

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. As described in Impact AQ-1, the Rheem Valley work area (Work Area 4), doesn't heavily overlap the treatable landscape and it is further from the treatable landscape than other maintenance areas. However, within the boundary of the project area, the air quality conditions present and types of sensitive receptors in the areas outside the treatable landscape are essentially the same as those within, or adjacent to, the treatable landscape; therefore, the air quality impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Air Quality Impacts

The proposed treatments are consistent with the treatment types and activities covered in the CalVTP PEIR. The project proponent has considered the site-specific characteristics of the proposed treatments and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (refer to Sections 3.4.1, "Regulatory Setting" and 3.4.2, "Environmental Setting" in Volume II of the Final PEIR). The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR, but the added acreage would not expand the total annual acreage proposed for treatment under the PEIR of 250,000 acres per year. However, within the boundary of the Project area, the existing



environmental and regulatory conditions pertinent to air quality that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they are immediately adjacent to each other, the air basin is the same, and the treatment activities and associated air emissions are the same. Therefore, the impacts are the same and, for the reasons described above, impacts of the proposed treatment Project are consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impact not addressed in the PEIR. No new impact related to air quality would occur that is not covered in the PEIR. Therefore, no new impact related to air quality would occur.



4.4 Archaeological, Historical, and Tribal Cultural Resources

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

¹NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.

New Archaeological, Historical, and Tribal Cultural Resource Impacts: Would the treatment result in other impacts to archaeological, historical, and Tribal cultural resources that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion
	Potentially Significant	Less Than Significant with Mitigation Incorporated	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.4.1 Discussion

A cultural resources assessment report has been prepared for the Project area, which includes the treatment areas. The methods performed for this report included a background records search consistent with SPR CUL-1, notifications to local Native American representatives consistent with SPR CUL-2, cultural resource research consistent with SPR CUL-3, and a stratified sampling-approach pedestrian survey of the Project area consistent with SPR CUL-4. A total of four records searches were performed for this Project. The initial record search was requested at the Northwest Information Center (NWIC) to determine whether any portions of the Project area had been previously surveyed for cultural resources and to identify the presence of any previously recorded cultural resources within the Project area, as well as a 0.25-mile buffer (the search radius). The records search was received on August 4, 2022 (NWIC File No. 21-2154). Due to changes to the Project area footprint, a subsequent records search was conducted in-house at the NWIC on November 2, 2022 (NWIC File No. 22-0722). Due to



additional changes, another records search was conducted in-house at the NWIC on January 12, 2023 (NWIC File No. 22-1061) Further changes were introduced in April 2023 that required a records search (NWIC File No. 22-1612). Summaries of each records search result are provided in Attachment C. Other sources of information that were reviewed included, but were not limited to, the current listings of properties on the National Register of Historic Places (NRHP), California Historical Landmarks, California Register of Historical Resources (CRHR), California Points of Historical Interest as listed in the Office of Historic Preservation’s (OHP’s) Historic Property Directory, and the Built Environment Resource Directory for Contra Costa County (OHP 2020).

Four resources have been previously recorded within the treatment area or intersect with the boundaries of the treatment area, while five have been previously recorded within the search radius. No CRHR- or NRHP-listed historical resources or properties have been recorded within the treatment area or the search radius (Table 4).

Table 4. Previously Recorded Resources within the Treatment Area and Search Radius

Primary No.	Name/Description	Type	Age
Resources Previously Identified within the Project Area			
P-07-000404	Carrick Homestead Site	Site	Prehistoric, Historic
P-07-000405	Locus 2	Site	Historic
P-07-003118	Moraga PG&E High Lead Electrical Transmission Tower	Structure	Historic
P-07-004688	Contra Costa - Moraga Transmission Line	Structure	Historic
Resources Previously Identified within the Search Radius			
P-07-000475	Locus 1; Boeger Ranch	Site, District	Historic
P-07-000742	CC-77-1	Site	Prehistoric
P-07-002705	Park Gallery Commercial Building	Building	Historic
P-07-002746	Rheem Theatre	Building	Historic
P-07-003118	Moraga PG&E High Lead Electrical Transmission Tower	Structure	Historic

Of the four previously recorded resources, P-07-00404 and P-0700405 were characterized as both historical and prehistoric archaeological sites, while the remaining two resources are electrical transmission lines. In the case of P-07-00404, the original site boundaries intersect with the boundaries of Work Area 4 near Las Trampas Creek; however, only a very small segment overlaps with the Work Area. Neither of the archaeological sites have been previously evaluated for listing in the CRHR or NRHP. The transmission line structures were determined to lack significance per CEQA and NRHP criteria (Supernowicz 2012, Supernowicz 2017).

According to the record search results, the boundaries of 39 previous studies intersect the Project area. Of the approximately 1,320 acres of land within the Project area, which includes the six Work Areas, about 1,000 acres have been previously surveyed for cultural resources. The majority of the previous surveys were conducted within Work Area 4.



In addition to the above records searches, a pedestrian survey was conducted by a Horizon Water and Environment (Horizon) archaeologist of areas within the Project area that represented slopes of 20 percent or lower, were over 2 acres in area, and were within proximity of a stream or confluence. The surveys were conducted on four separate dates: December 8, 2022; January 26 and 27, 2023; and June 2, 2023. All areas that met the previously mentioned criteria were surveyed using intensive survey techniques (or transects of 20 meters); all other areas were subjected to a more cursory inspection. Two of the previously recorded resources within the Project area, P-07-000404 and P-07-000405, were revisited in the field during the field survey. Both resources have been destroyed by development or grading associated with housing or roadway projects, and no surface evidence of the sites was identified. Due to the heavy vegetation and grass cover, 24 shovel test pits were dug in areas considered of higher sensitivity for archaeological resources, in order to better observe the subsurface conditions and inspect for evidence of archaeological deposits. No evidence of archaeological deposits was identified throughout the surveys.

Consistent with CalVTP SPR CUL-2, an updated Native American contact list and sacred lands file search was obtained from the NAHC. The sacred lands data file indicated no sacred land had previously been recorded within the Project area or adjacent lands. On November 15, 2022, letters were sent to each of the 16 Tribal contacts provided by the NAHC. The letters requested information regarding Tribal resources and asked the tribes to notify MOFD if they wished to initiate consultation regarding the Project actions. To date, one response has been received from Corrina Gould, of the Confederated Villages of Lisjan Nation, who requested further consultation regarding the Project. MOFD met with Chairperson Gould on February 22, 2023, to discuss her concerns. As planning proceeds, MOFD will continue to consult with interested Tribal representatives regarding the Project and incorporate their concerns into project planning and mitigation as warranted.

Impact CUL-1

The potential for vegetation treatment activities, such as manual and mechanical treatments that cause ground disturbance, to cause adverse effects to historical resources (those resources evaluated as eligible for listing in the CRHR), was examined in the PEIR and found to be less than significant. According to the NWIC records search and surveys conducted for the Project, no elements of the historic-era built environment were previously identified within the Project area, nor were any identified during the field surveys. The transmission towers previously recorded that intersect many areas within the Project area were both determined to lack eligibility for the CRHR and NRHP (Supernowicz 2012, Supernowicz 2017) and therefore require no further treatment or mitigation. However, even if present within the Project areas, any potential impact to historical resources would be avoided, per SPR CUL-7, due to the lack of any proposed demolition or material alteration of a structure or building. This potential impact is within the scope of the PEIR, because the treatment activities and the intensity of ground disturbance that would occur under the proposed project are consistent with those analyzed in the PEIR. SPRs applicable to this impact are CUL-1, CUL-7, and CUL-8. As described above, archaeological and historical resource record searches have been conducted per SPR CUL-1. SPR CUL-7 requires the



avoidance of known built historical resources and the avoidance of built-environment structures that have not yet been evaluated for historical significance and SPR CUL-8 requires worker training regarding protection of historical resources.

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

Impact CUL-2

Vegetation treatment activities would include mechanical treatments that use heavy equipment that could result in ground disturbance as vegetation is removed, which may result in adverse impacts to unknown historical resources (archaeological sites) or unique archaeological resources if present within a treatment area. According to the NWIC records search and surveys conducted for the Project, the previously recorded resources that are located within the Project area or intersect with the Project area, P-07-000404 and -0000405, have been destroyed or are no longer extant within the area of recordation. Consequently, no impact to these resources is expected to occur from the program actions. However, subsurface components of these sites may still exist within the areas of proposed activity. The potential for these treatment activities to result in disturbance to, damage to, or destruction of archaeological resources was examined in the PEIR and found to be significant but would be less than significant for the proposed project with implementation of SPRs and mitigation. This impact is within the scope of the PEIR, because the treatment activities and the intensity of ground disturbance that would occur under the proposed project are consistent with those analyzed in the PEIR. SPRs applicable to this impact are CUL-1 through CUL-5 and CUL-8. As described above, methods consistent with SPR-1 through SPR-4 have been implemented for the purposes of this PSA. Further, SPR CUL-8 shall be implemented, which requires worker training regarding the protection of sensitive archaeological, historical, and Tribal cultural resources. MM CUL-2 would also apply to this treatment to protect any inadvertent discoveries of archaeological resources.

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



Impact CUL-3

As previously summarized, Native American contacts identified by the NAHC were sent an invitation to consult via certified mail on November 15, 2022, consistent with the requirements of SPR CUL-2. One response has been received requesting consultation from the Confederated Villages of Lisjan Nation. The potential for treatment activities to cause a substantial adverse change in the significance of a Tribal cultural resource was examined in the PEIR. Proposed treatment activities include manual and mechanical treatment activities that may require ground disturbance, as well as the use of herbicides, which may adversely affect ethnobotanicals or material culture that may have Tribal importance. The potential for the proposed treatment activities to cause a substantial adverse change in the significance of a Tribal cultural resource during vegetation treatment was examined in the PEIR and found to be less than significant \ with the implementation of SPR CUL-6. As planning proceeds, additional information provided by tribes during the consultation process may identify the potential for a substantial adverse change to a Tribal cultural resource to result from Project-related actions, and measures to protect the resource shall be formulated consistent with SPR CUL-6, which, upon implementation, would avoid any substantial adverse change to any Tribal cultural resource. The potential for adverse effects on Tribal cultural resources during implementation of the proposed project is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and intensity of ground disturbance are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are CUL-1 through CUL-6 and CUL-8. SPRs CUL-1 through CUL-4 have been conducted during preparation of this PSA. SPR CUL-5 and CUL-6 require consulting with the geographically affiliated tribes to avoid and protect any resources identified; and SPR CUL-8 requires worker training regarding the protection of sensitive archaeological, historical, and Tribal cultural resources.

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

Impact CUL-4

Vegetation treatment activities would include mechanical treatments using heavy equipment; these treatments may use tractors, skidders, masticators, and/or chippers, which could uncover human remains if present in a treatment area. The potential for treatment activities to uncover human remains was examined in the PEIR and found to be less than significant. The NWIC records search did not identify any previously recorded burials or sites that have the potential to contain human remains. This impact is within the scope of the PEIR, because the intensity of ground disturbance under the proposed project is consistent with what was analyzed in the PEIR. Additionally, consistent with the PEIR, the proposed



project would comply with California Health and Safety Code Sections 7050.5 and 7052 and PRC Section 5097 in the event of a discovery.

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

New Archaeological, Historical, and Tribal Cultural Resource Impacts

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



4.5 Biological Resources

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact BIO-1: Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications	LTSM	Impact BIO-1, pp 3.6-131–3.6-138	Yes	AD-2, AD-3, AD-5, AQ-3, AQ-4, BIO-1, BIO-2, BIO-3, BIO-5, BIO-6, BIO-7, BIO-9, GEO-1, GEO-3, GEO-4, GEO-5, GEO-7, HAZ-5, HAZ-6, HYD-2	BIO-1a BIO-1b BIO-4	LTSM	No	Yes
Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications	LTSM, SU for Western bumblebee	Impact BIO-2, pp 3.6-138–3.6-184	Yes	AD-2, AD-3, AD-5, AQ-3, AQ-4, BIO-1, BIO-2, BIO-3, BIO-5, BIO-9, BIO-10, BIO-11, BIO-12, GEO-1, HAZ-5, HAZ-6, HYD-1, HYD-2, HYD-3, HYD-4, HYD-5	BIO-2a BIO-2b BIO-2e BIO-2g BIO-3a BIO-4 BIO-5	SU: Western bumblebee LTSM for all others	No	Yes
Impact BIO-3: Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation that Leads to Loss of Habitat Function	LTSM	Impact BIO-3, pp 3.6-186–3.6-191	Yes	AD-2, AD-3, AD-5, BIO-1, BIO-2, BIO-3, BIO-5, BIO-6, BIO-9, HYD-4	BIO-3a	LTSM	No	Yes
Impact BIO-4: Substantially Affect State or Federally Protected Wetlands	LTSM	Impact BIO-4, pp 3.6-191–3.6-192	Yes	AD-2, AD-3, AD-5, BIO-9, HAZ-5, HAZ-6, HYD-1, HYD-2, HYD-3, HYD-4, HYD-5	BIO-4	LTSM	No	Yes
Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries	LTSM	Impact BIO-5, pp 3.6-192–3.6-196	Yes	AD-2, AD-3, AD-5, BIO-1, BIO-2, BIO-3, BIO-5, BIO-10, BIO-11, HYD-4, HYD-5	BIO-5	LTSM	No	Yes



Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife	LTS	Impact BIO-6, pp 3.6-197–3.6-198	Yes	AD-2, AD-3, AD-5, BIO-1, BIO-2, BIO-3, BIO-5, BIO-12	--	LTS	No	Yes
Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources	No Impact	Impact BIO-7, pp 3.6-198–3.6-199	Yes	AD-3	--	No Impact	No	Yes
Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan	No Impact	Impact BIO-8, pp 3.6-199–3.6-200	No	--	--	--	--	--

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

New Biological Resources Impacts: Would the treatment result in other impacts to biological resources that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion	
	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.5.1 Discussion

Inclusion of Land Outside the Treatable Landscape

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the treatment area, general habitat characteristics are essentially the same within and outside the treatable landscape (e.g., no resource is affected outside the treatable landscape that would not also be similarly affected within the treatable landscape). Therefore, the potential impact on sensitive biological resources is also the same and analyzed simultaneously. All impacts have been found to be “Less Than Significant with Mitigation” or “Less Than Significant” following implementation of the SPRs and MMs described for each impact below. This determination is consistent with the PEIR and thus would not constitute a substantially more severe significant impact than what was covered in the PEIR.



4.5.2 *Impact BIO-1: Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications – Less Than Significant with Mitigation*

The Biological Resources Report identified 76 sensitive plant species with potential to occur in the Project area (Figure 8, Tables 3 and 5 in Attachment B). Following a field reconnaissance survey, it was determined that 16 species had moderate to high potential to occur on the Project site. Potential impacts and approach to mitigating impacts for these 16 species are discussed further in this section.

The Project proposes manual and mechanical vegetation removal, prescribed burning, pile burning, prescribed herbivory, and targeted herbicide application. These treatment activities could result in direct or indirect adverse effects to special-status plant species. Mechanical treatment and herbicide application have potential to impact special-status species directly or indirectly if not strategically applied; however, strategic removal of understory vegetation and invasive species would promote the regeneration of native species that support a healthier residual forest. The Project is designed to reduce the risk of catastrophic stand-replace wildfires, which would threaten known sensitive plant populations.

The potential for adverse effects to special-status plant species is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and intensity of disturbance resulting from implementing treatment activities are consistent with those analyzed in the CalVTP PEIR. Impacts to special status plants would be reduced to less than significant with the following Standard Project Requirements and Mitigation Measures. Additional Project-specific measures are described below each applicable measure.

SPR AD-2 Delineate Protected Resources for Avoidance

SPR AD-3 Consistency with Local Plans, Policies, and Ordinances

SPR AD-5 Maintain Site Cleanliness

SPR AQ-3 Create Burn Plan

- Project design includes a fire restriction zone. No fire ignition (nor use of associated accelerants) would occur within 50 feet of listed plants.

SPR AQ-4 Minimize Dust

SPR BIO-1: Review and Survey Project-Specific Biological Resources and Determine whether avoidance is possible

- The current Biological Resources Report describes a desktop review and a reconnaissance field survey which satisfies a component of CalVTP Standard Project Requirement SPR BIO-1.
- A qualified biologist will conduct a pre-treatment survey to identify, map, and flag any sensitive plants or vegetative communities for avoidance or follow-up surveys if needed. The surveys will be conducted when weather conditions and timeframes are suitable for the detection of



sensitive resources. No work will occur in the work area until the area has been adequately surveyed and assessed for sensitive resources.

SPR BIO-2: Require Biological Resource Training for Workers

- All crew members and contractors will receive training from a qualified biologist prior to the start of work in all work areas. The training will describe the appropriate work practices necessary to effectively implement the appropriate sensitive resource impact avoidance measures and to comply with the applicable environmental laws and regulations. The training will include the identification, relevant life history information, and avoidance of special-status plant species with potential to occur; identification and avoidance of sensitive natural communities and habitats with the potential to occur in the treatment area; and Best Management Practices. As appropriate, the training will include protocols for work, such as specific trimming techniques and herbicide application methods where applicable.

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats and Map Locations

- If any rare plant populations are found, location, quantity and description will be reported to the CNDDDB. Any in-field methods of identification that will require handling will follow proper permitting and protocols. Rare plants will be demarcated with flagging and avoided during work.

SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub

- Chaparral and Coastal Sage Scrub habitat in the Project footprint is suitable Alameda whipsnake habitat and will be referred to as AWS habitat. Work in AWS scrub habitat will be restricted to hand tools only. The nature of shaded fuel break work will not change the habitat functions of dispersal and foraging, including AWS, core scrub habitat. AWS 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 above 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 selectively remove scrub in a way that retains these dimensions, and therefore retains 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:
 - 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.
 - Vegetation removal will focus on dead, woody materials, and invasive plants.



Preliminary and post-treatment surveys will be conducted that will assess the condition and acreage of core scrub habitat. Post-treatment conditions will be assessed to ensure that there is no overall loss of habitat functionality within AWS core scrub.

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 a long period of time, chaparral and scrub communities will naturally be converted to woodland and forested habitat. Thoughtful treatment of select areas which incorporates the retention of scrub islands suitable for AWS core scrub is expected to be more effective in retaining key core scrub AWS habitat than complete avoidance of these areas.

SPR BIO-6: Prevent Spread of Plant Pathogens

- *Phytophthora ramorum* 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. *P. ramorum* has devastated oak stands throughout Contra Costa and Alameda County 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 *P. ramorum*, 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 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.
- Any material suspected of being infected must stay in the area, as close to the origin point as possible. Generally, removal of *P. ramorum*-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.

SPR BIO-7: Survey for Special-Status Plants

SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife

- Broom (*G. monspessulana*, *S. junceum*, and *C. scoparius*) and Italian star thistle (*Carduus pycnocephalus*) are common invasive plants in the project areas and are classified as a noxious weed by the California Invasive Plant Council. It is an aggressive species whose seeds are easily spread by project activities. No species of broom or star thistle should be chip cut; instead, it should be hand-pulled whenever possible. If the 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.



- When working in areas with broom, star thistle, or other invasive plants, crews will ensure 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.

SPR GEO-1: Suspend Disturbance during Heavy Precipitation

SPR GEO-3: Stabilize Disturbed Soil Areas

- Soil areas disturbed by mechanical, prescribed herbivory, and prescribed burns that exhibit bare soil over 50 percent or more of the treatment area will be stabilized with mulch or organic matter produced from non-invasive vegetation removal biomass disposal.

SPR GEO-4: Erosion Monitoring

- Erosion will be monitored by the project proponent through an inspection for proper implementation of applicable SPRs and mitigations prior to the rainy season, and an inspection will be conducted of the treated areas for evidence of erosion after the first large storm or rainfall event.

SPR GEO-5: Drain Stormwater via Water Breaks

SPR GEO-7: Minimize Erosion

- Heavy equipment will remain on existing roads to prevent erosion, and treatment will not occur on slopes 50% or greater.

SPR HAZ-5: Spill Prevention and Response Plan

- Herbicide application will not occur within protective buffers for special-status plants to prevent drift and non-target application.

SPR HAZ-6: Comply with Herbicide Application Regulations

SPR HYD-2: Avoid Construction of New Roads

- No new roads will be created as part of Project implementation.

Even with implementation of the above SPRs, impacts could be potentially significant per the CalVTP PEIR. Following implementation of MMs BIO-1a and BIO-1b, 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. Additionally, all state and federally protected wetlands will be avoided (MM BIO-4) by a standard



buffer of 50 feet, and will be adjusted if slopes or other conditions warrant an increased buffer. Mitigation of the 16 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:

- 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

MM BIO-1a: Avoid Loss of Special-Status Plants Listed under ESA or CESA

MM BIO-1b: Avoid Loss of Special-Status Plants Not Listed Under ESA or CESA

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

MM BIO-4: Avoid State and Federally Protected Wetlands

Impacts to Annual Forbs

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:

- Bent-flowered fiddleneck (*Amsinckia lunaris*)
- Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*)
- Bristly leptosiphon (*Leptosiphon acicularis*)
- Oregon meconella (*Meconella oregana*)
- Woodland woollythreads (*Monolopia gracilens*)
- Michael's rein orchid (*Piperia michaelii*)
- Caper-fruited tropidocarpum (*Tropidocarpum capparideum*)

To avoid impacts on herbaceous annual forb species, focused botanical surveys will 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 will be recorded using a GPS and mapped. No Project-related ground disturbance will occur generally within a 50 foot buffer of these identified locations. 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 will be treated as potentially special status species and will be offered the same protective buffer for avoidance.



Impacts to Perennial Forbs

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:

- Big-scale balsamroot (*Balsamorhiza macrolepis*)
- Big tarplant (*Blepharizonia plumosa*)
- Mt. Diablo fairy lantern (*Calochortus pulchellus*)
- Diablo helianthella (*Helianthella castanea*)

To avoid impacts on herbaceous perennial forb species, focused botanical surveys will 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 will be recorded using a GPS and mapped. Special-status plants identified during protocol-level surveys would be given a no-disturbance buffer of at 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 will be treated as potentially special status species and will be offered the same protective buffer for avoidance.

Impacts to Woody Shrubs, Trees, and Vines

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:

- Western leatherwood (*Dirca occidentalis*)
- Loma Prieta hoita (*Hoita strobilina*)
- California black walnut (*Juglans californica*)
- Oval-leaved viburnum (*Viburnum ellipticum*)

To avoid impacts on persistent above-ground perennial species, focused botanical surveys will 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 will be recorded using a GPS and mapped. Special-status plants identified during protocol-level surveys would be given a no-disturbance buffer of at 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 will be treated as potentially special status species and will be offered the same protective buffer for avoidance.



Impacts to Sensitive Natural Communities

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).

With implementation of all SPRs and MMs listed above, including survey protocols and preoperational meetings, impacts to special-status plant species would be reduced to less than significant.

4.5.3 Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications – Less Than Significant With Mitigation, except Western Bumblebee – Potentially Significant and Unavoidable

The Biological Resources Report describe 18 sensitive wildlife species with potential to occur in the Project area (Figure 9, Tables 4 and 6 in Attachment B). Following a field reconnaissance survey, it was determined that 12 species had potential to occur on the Project site. Potential impacts and approach to mitigating impacts for these 12 species are considered in this section.

Manual and mechanical vegetation removal, broadcast and pile burning, targeted herbicide application, and prescribed herbivory have the potential to result in direct or indirect adverse effects to special-status wildlife species or habitat. Manual and mechanical treatments, herbivory, prescribed broadcast burn, and targeted herbicide application would result in reduced understory vegetation that may modify preferred habitats for some species; however, it would promote a healthier, native residual forest habitat.

Consistent with impacts analyzed in the CalVTP PEIR, impacts to special status wildlife would be reduced to less than significant with the following Standard Project Requirements and Mitigation Measures. In addition to the CalVTP PEIR SPRs and MMs, additional Project-specific measures are described below each applicable measure, and are addressed for each individual special status species.

SPR AD-2: Delineate Protected Resources for Avoidance

SPR AD-3: Consistency with Local Plans, Policies, and Ordinances

SPR AD-5: Maintain Site Cleanliness

SPR AQ-3: Create Burn Plan

- 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, or any identified sensitive species or habitat.
- 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 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).

SPR AQ-4: Minimize Dust

SPR BIO-1: Review and Survey Project-Specific Biological Resources and Determine Whether Avoidance is Possible

- A qualified biologist will conduct a pre-treatment survey to identify, map, and flag any sensitive wildlife resources for avoidance or follow-up surveys if needed. The surveys will be conducted when weather conditions and timeframes are suitable for the detection of sensitive resources. No work will occur in the work area until the area has been adequately surveyed and assessed for sensitive resources. Pre-treatment surveys may occur concurrently with nesting bird, passerine, raptor, and roosting bat surveys, or with AWS or California red-legged frog focused surveys.

SPR BIO-2: Require Biological Resource Training for Workers

- All crew members and contractors will receive training from a qualified biologist prior to the start of work in all work areas. The training will describe the appropriate work practices necessary to effectively implement the appropriate sensitive resource impact avoidance measures and to comply with the applicable environmental laws and regulations. The training will include the identification, relevant life history information, and avoidance of special-status wildlife species with potential to occur; identification and avoidance of sensitive natural communities and habitats with the potential to occur in the treatment area; and Best Management Practices. As appropriate, the training will include vegetation treatment protocols for work near suitable habitat for western bumblebee, monarch butterfly, California red-legged frog, California newt, western pond turtle, AWS, golden eagle, American peregrine falcon, pallid bat, Townsend's big-eared bat, San Francisco dusky-footed woodrat, American badger, and nesting birds.

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats and Map Locations

- See discussion below for species-specific habitat measures

SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub.

- See discussion in Impact BIO-1 for measures to retain this habitat as scrub islands and to avoid type conversion



SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife.

SPR BIO-10: Survey for Special-Status Wildlife and Nursery Sites.

- See below for impacts discussion on western bumblebee, monarch butterfly, California red-legged frog, California newt, western pond turtle, AWS, golden eagle, American peregrine falcon, pallid bat, Townsend's big-eared bat, San Francisco dusky-footed woodrat, American badger, and nesting birds.

SPR BIO-11: Install Wildlife-Friendly Fencing during Prescribed Herbivory.

SPR BIO-12: Protect Common Nesting Birds, Including Raptors through the use of avoidance buffers, treatment modification, or treatment delay. Monitor Active Raptor Nest During Treatment and Retain Raptor Nest Trees.

- See below for impacts discussion of raptors and nesting birds.

SPR GEO-1: Suspend Disturbance during Heavy Precipitation

SPR HAZ-5: Spill Prevention and Response Plan

SPR HAZ-6: Comply with Herbicide Application Regulations

SPR HYD-1: Comply with Water Quality Regulations

SPR HYD-2: Avoid Construction of New Roads

SPR HYD-3: Water Quality Protections for Prescribed Herbivory

SPR HYD-4: Identify and Protect Watercourse and Lake Protection Zones

SPR HYD-5: Protect Non-Target Vegetation and Special-status Species from Herbicides

Even with implementation of the above SPRs, impacts could be potentially significant per the CalVTP PEIR. Following implementation of additional MMs BIO-2a, BIO-2b, BIO-2e, BIO-2g, BIO-4, and BIO-5 special-status wildlife with moderate to high potential to occur would be addressed as described below.

MM BIO-2a: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Listed Wildlife Species and California Fully Protected Species

MM BIO-2b: Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Other Special-Status Wildlife Species

MM BIO-2e: Design Treatment to Retain Special-Status Butterfly Host Plants – Monarch Butterfly



MM BIO-2g: Design Treatment to Avoid Mortality, Injury, or Disturbance and Maintain Habitat Function for Special-Status Bumble Bees

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

MM BIO-4: Avoid State and Federally Protected Wetlands

MM BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Site

Impacts to Western Bumble Bee

Western bumble bee is a State Candidate species, and is known to be present within the vicinity of the Project area. Western bumble bee occurs in chaparral, valley foothill and grassland, and oak woodlands, where there is an abundance of nectar plants and soft ground to create burrows. Suitable grassland and forest habitat is present throughout the Project area, and individual bumble bee and burrows have been observed throughout the area. Direct and indirect impacts could occur to western bumble bee from off-road travel and removal of flowering plants. The Project does not propose ground disturbance or heavy equipment off-road.

The Project is designed to avoid riparian habitat and type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and no new roads will be created (SPR HYD-2). Pre-treatment surveys would combine a focused survey (SPR BIO-1, SPR BIO-3, SPR BIO-10) following CDFW's Survey Considerations for CESA Candidate Bumble Bees (June 2023) to identify suitable habitat, foraging adults, nest burrows, and overwintering burrows within the Project footprint. Crew members and contractors would be trained to identify and avoid these western bumblebee burrows if encountered (SPR BIO-2), and a biological monitor will be present on site to provide guidance as needed. If identified, these burrows 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.

Although MMs BIO-2a, BIO-2b, BIO-2g, BIO-3a, and BIO-4 would reduce impacts on foraging special-status bumble bees and their floral resources, substantial adverse effects could still occur to special-status bumble bee species during nesting and overwintering, because vegetation treatment activities could kill individuals or crush or disturb overwintering or nesting colonies. If western bumble bee, nursery sites, or flowering nectar plants are observed during focused surveys using CDFW's June 6, 2023 "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species" (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:

- If feasible, treatment activities would occur during periods when western bumble bee colonies are least active (e.g., October to January). If avoiding peak colony active time and queen and gyne flight periods is deemed infeasible for project implementation. 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.

- 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 *B. franklini*, *B. occidentalis*, and/or *B. suckleyi*), 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.

Because little is known about the life history and behaviors of western bumble bee, they can be difficult to detect, and there is no established methodology for detecting overwintering or nesting colonies of these species, western bumble bee may be difficult to completely avoid during proposed Project treatment activities. If colonies were destroyed, it is possible that populations of these species would be reduced below self-sustaining levels, and treatment activities could substantially reduce the number or restrict the range of species. Primary threats to the survival of special-status bumble bees include habitat loss or modification due to development, agriculture, high-intensity fire, fire suppression, and herbicide use (Xerces Society et al. 2018). The objective of the CalVTP is to reduce the occurrence of high-intensity wildfire and modify past practices of fire suppression, which could beneficially decrease an existing threat to western bumble bee; however, in the process of achieving this objective, there are potential impacts to western bumble bee. The CalVTP PEIR recognizes the difficulty in detecting overwintering and nesting bumble bees, determining the occurrence and severity of impacts, and that impacts to western bumble bee are designated in the PEIR to be potentially significant and unavoidable. The Project Proponent has concluded accordingly that proposed Project impacts are consistent with those described in the CalVTP PEIR, and that impacts to western bumble bee by the proposed treatment activities are potentially significant and unavoidable. See Statement of Overriding Considerations (Attachment D).



Impacts to Monarch Butterfly

Monarch butterfly (*Danaus plexippus*) is a State Candidate species that is known to be present within the vicinity of the Project area. Monarch butterfly is found in meadows, grasslands and prairies, and lays eggs exclusively on native milkweed plants. This species can also be found in urban and wet areas where ample populations of native milkweed are found. Direct and indirect impacts could occur to Monarch butterfly through removal of flowering plants providing nectar, removal of native milkweed stands for larval development, and collisions with project vehicles.

The Project is designed to avoid riparian habitat and type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and no new roads will be created (SPR HYD-2). Treatment activities would be suspended during heavy precipitation until soils are no longer saturated (SPR GEO-1), and this would reduce the potential for Project activities to disturb burrows. Pre-treatment surveys would be combined with a focused survey (SPR BIO-1, SPR BIO-3, SPR BIO-10) to identify native milkweed plants, nectar plants, and all life stages of monarch butterfly within the Project footprint. Crew members and contractors would be trained to identify and avoid milkweed and monarch butterfly if encountered (SPR BIO-2) and a biological monitor will be present on site to provide guidance as needed. If identified, milkweed and monarch larvae/pupae 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.

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, the implementation of MM BIO-2a, BIO-2b, BIO-2e, and BIO-3a would be implemented including targeting removal of non-native vegetation, protecting native milkweed, and restricting prescribed burning activities to the season when monarch butterfly is inactive to avoid direct impacts to individuals and their nectar plants. If Monarch butterfly, monarch larva host plants (region-specific native milkweeds: *Asclepias californica*, *A. fascicularis*, or *A. speciosa*), or flowering nectar plants (e.g., *Achillea millefolium*, *Agastache urticifolia*, *Arctostaphylos* spp., *Baccharis pilularis*, *B. salicifolia*, *Ceanothus* spp., *Grindelia* spp., *Helianthus* spp., *Heteromeles arbutifolia*, *Monardella* spp., *Salix* spp., *Salvia* spp., *Solidago* spp., *Verbena lasiostachys*, 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 avoiding treatment activities during 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. Because the Project proposes to remove invasive species through various treatments, the results of Project implementation may improve habitat quality for monarch butterfly. With these additional focused MMs, impacts to monarch butterfly would be reduced to less than significant. This impact is consistent with the CalVTP PEIR.



Impacts to California Red-Legged Frog, California Newt, and Western Pond Turtle

California red-legged frog (*Rana aurora draytonii*; CRLF) occupies permanent and ephemeral ponds and streams and utilizes upland habitats adjacent to these features for aestivation and dispersal. The California red-legged frog predominately inhabits permanent water sources such as streams, lakes, marshes, natural and man-made ponds, and ephemeral drainages in valley bottoms and foothills up to 1,500 meters in elevation (Stebbins 2003). During the dry season, CRLF may use refugia in upland habitat, such as small mammal burrows or adjacent moist vegetation, for aestivation (USFWS 2002b).

California newt (*Taricha torosa*) is a State Species of Special Concern that has potential to occur on the Project site. California newts breed in ponds, reservoirs, and slow-moving streams, and utilize upland habitat such as wet forests, oak woodland, chaparral, and grassland with burrows or other refugia. Home range and maximum dispersal distance is not well-studied, one study (Trenham 1998) recaptured adult newts up to 3,200 meters from the breeding pond where they were marked.

Western pond turtle (*Actinemys marmorata*) is vulnerable in California. It uses upland and aquatic habitat in and around freshwater ponds and streams. This species nests in leaves or soil upland from water bodies in flat areas with short vegetation and dry soil that is highly associated with ponds and streams. Manual and mechanical methods of vegetation removal could impact upland areas used for egg laying, and vehicles or livestock used for prescribed herbivory could trample pond turtles or their eggs.

The Project is designed to avoid riparian habitat, aquatic features, and protection zones (SPR HYD-4), type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and creation of new roads (SPR HYD-2). 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 ground-supporting burrows, nests occupied by CRLF, California newts, and western pond turtles, and would reduce the 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 individuals of all life stages, nests, and aestivation sites within the Project footprint. Crew members and contractors would be trained to identify and avoid nests, aestivation and breeding habitat, and individuals of all life stages, if encountered, (SPR BIO-2) and a biological monitor will be present on site to provide guidance as needed. If habitat or individuals are encountered, they would be protected with an avoidance buffer (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 herbicide to avoid native plants, and will reduce the potential for impacts to aquatic and upland habitat occupied by this species.

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, the implementation of MM BIO-2a, BIO-2b, BIO-3a (overwintering upland habitat), 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 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 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.

A qualified biologist will conduct protocol-level surveys for California red-legged frog pursuant to the Revised Guidance on Site Assessments and Field Surveys for the California Red-Legged Frog (USFWS 2005) within habitat potentially suitable for the species, or presence of the species will be assumed and MM BIO-2a will be implemented. If protocol-level surveys are conducted and California red-legged frogs are not detected within the treatment areas, then no mitigation for the species will be required and avoidance buffers (as required in MM BIO-2a) will not be required. If California red-legged frog is detected or assumed present, MM BIO-2a will be implemented.

To avoid impacts on western pond turtle, focused visual encounter surveys for the species and for potentially suitable burrows will 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 will 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 will be implemented.

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:

- Mechanized operations would be shut down when the precipitation threshold is met, and the shutdown period would begin once the precipitation event has ended.
- If California red-legged frog, 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 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.



California Red-Legged Frog

- 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.
- 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, 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 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 US 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.

The following additional measures apply to a variety of sensitive reptiles and amphibians with potential to occur in the Project area.

- All contractors, their employees, and agency personnel involved in the implementation of the project would check for the presence of AWS, 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 AWS, 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 AWS, California red-legged frog, California newt, or western pond turtle.

- 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 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 including front-loaded mastication equipment which may collapse burrows would occur exclusively from compacted surfaces such as established roads and trails.

With these additional MMs, impacts to California red-legged frog, California newt, and western pond turtle would be reduced to less than significant. This impact is consistent with the CalVTP PEIR.

Impacts to Alameda Whipsnake

AWS is a state and Federally threatened species of snake that may occur within the Project area. This species primarily utilizes scrub and chaparral habitats and uses adjacent oak woodland and grassland habitats for foraging and dispersal. This species is also highly associated with rocky outcrops within and adjacent to core scrub areas for basking and foraging. Federally designated Critical Habitat is identified within the Project footprint, suitable coyote brush scrub was observed during reconnaissance surveys, and the species is known to be locally present. Direct impacts could occur during manual removal and traveling on- and off-road.

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, which greatly reduces the potential for direct impacts to AWS. Indirect impacts could occur from habitat type conversion of scrub and chaparral; however, vegetation removal in these habitats would include creating a natural mosaic of scrub islands (scrub patches measuring approximately 50 feet long by 50 feet wide) to prevent type conversion and potentially enhance habitat by creating mosaiced, less-dense scrub and chaparral communities. 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.

The Project is designed to avoid type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and creation of new roads (SPR HYD-2). 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 ground-supporting burrows and would reduce the 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 individuals and burrow sites within the Project footprint. Crew members and contractors would be trained to identify individuals and burrows if encountered, (SPR BIO-2) and a biological monitor will be present on site to provide guidance as needed. If individuals are encountered, they would be protected with an avoidance buffer (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 adhere to water quality protection measures when conducting prescribed herbivory (SPR HYD-3), herbicide application regulations (SPR HAZ-6) and restrict use of herbicide to avoid native plants, and will reduce the potential for impacts to suitable habitat.

AWS cannot be effectively avoided through seasonal avoidance or avoidance buffers, which may be effective for other species. Even following the above SPRs, project impacts could still be considered potentially significant. Measures that ensure full avoidance of AWS take will be implemented at all project areas. Therefore, implementation of the following AWS avoidance and minimization strategy will be utilized consistent with the following CalVTP MM BIO-2a, BIO-2b, and BIO-5.

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 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.

AWS Avoidance and Minimization Strategy. AWS would generally be assumed present in all scrub communities, adjacent grasslands, adjacent woodlands, and open woodland habitat.

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:

- 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 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.
 - 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 RFP or biologist deems the area to be highly suitable habitat for AWS, it may be required 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 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 AWS suitable winter retreats (e.g., within native scrub habitat, rock outcrops within approximately 50 feet of scrub habitat), as determined by a qualified 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 AWS. 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:** Road-based mechanical vegetation removal, 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). Within areas determined by the biologist to be suitable AWS habitat, mechanical treatment and prescribed burning would be avoided when temperatures are determined by the qualified biologist to be too low for AWS movement. Manual treatments may occur in cooler conditions, after the qualified 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:
 - 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 (AWS) through the following strategies:

- **Create Shrub Islands:** Vegetation removal in coastal scrub and chaparral habitat would be designed to create shrub islands. This, including all types of coastal scrub and chaparral, including as well as coyote brush scrub. Shrub islands are described based on the USFWS federal definition of AWS “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.
- Protection of Refugia Habitat: Rock outcroppings, mammal burrows, and native shrubs within 50 feet of rock outcroppings that are suitable AWS refugia (as determined by the qualified 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.
- AWS surveys will be conducted, and AWS habitat function will be maintained, as described below.

Maintaining Alameda Whipsnake 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.

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 selectively remove scrub in a way that retains these dimensions, and therefore retains 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:

- 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.
- Vegetation removal would focus on dead, woody vegetation, and invasive plants.

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.

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 a long period of time, chaparral and scrub communities will naturally be converted to woodland and forested habitat. Thoughtful treatment of select areas which incorporates the retention of scrub islands suitable for AWS core scrub is expected to be more effective in retaining key core scrub habitat for AWS than complete inaction in these areas.

This is consistent with AWS habitat protections described in CalVTP MM BIO-2b.

The following additional measures apply to a variety of sensitive reptiles and amphibians with potential to occur in the Project area.

- All contractors, their employees, and agency personnel involved in the implementation of the project would check for the presence of AWS, 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 AWS, 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 AWS, CRLF, 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 including front-loaded mastication equipment which may collapse burrows would occur exclusively from compacted surfaces such as established roads and trails.

With these additional focused MMs, impacts to AWS would be reduced to less than significant. This impact is consistent with the CalVTP PEIR.

Impacts to Golden Eagle and American Peregrine Falcon

Golden eagle is a state and Federal fully protected species that is Federally protected under the Bald and Golden Eagle Protection Act. Golden eagle was observed soaring and foraging within Work Area 4 during reconnaissance surveys and therefore is known to occur within the work areas, as it. Peregrine falcon is a state fully protected species that may occur within the work areas. Golden eagle is known to forage and disperse over the work areas, and it is likely that peregrine falcon does as well.

Direct impacts to species could occur if nest trees are removed. Indirect impacts include disturbance of active nests within a zone of influence of Project activities (0.5 mile), depending on the equipment to be used, anticipated amount of time for construction at a given location, sensitivity to disturbance of any nesting birds present, and other factors. Limbing-up of nest trees or trees adjacent to nest trees could disturb nesting activity. Removal of vegetative cover could indirectly impact these raptors by reducing cover for prey species.

The Project is designed to avoid riparian habitat and type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and no new roads will be created (SPR HYD-2). Trees greater than 6 inches DBH will be retained unless they pose a fire hazard as determined by the Project owner. Pre-treatment surveys would be combined with a focused nesting survey during nesting season (SPR BIO-1, SPR BIO-3, SPR BIO-10) to identify former and active golden eagle and American peregrine falcon nests within the Project footprint and a 0.5 mile buffer. Crew members and contractors would be trained to identify and avoid raptor nests if encountered (SPR BIO-2) and a biological monitor will be present on site to provide guidance as needed. If identified, active golden eagle and American peregrine falcon nests 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. 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 ground-supporting burrows for prey species such as rabbits and small mammals, and would reduce the potential for indirect impacts to this species. During prescribed herbivory activities, a wildlife-friendly fencing will be installed to allow perching by avian species and prevent electrocution (SPR BIO-11).

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, MMs BIO-2a, BIO-2b, and BIO-4 would be implemented, including avoidance of protected aquatic features, targeting removal of non-native vegetation, strategic native vegetation removal to retain habitat function and prevent type conversion, and restricting treatment activities to non-nesting



season as possible avoid impacts to nest success and prey base. 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. With these additional focused MMs, impacts to golden eagle and American peregrine falcon would be reduced to less than significant. This impact is consistent with the CalVTP PEIR.

Impacts to Nesting Birds Protected by the Migratory Bird Treaty Act. Nesting birds are protected under the Migratory Bird Treaty Act (16 USC §§ 703–711), as administered by the USFWS. Under this act, it is unlawful to kill, injure, or harass birds or their eggs, or directly or indirectly cause the failure of an active nest through actions that result in birds abandoning their nests.

Birds have the potential to nest in all work areas if work is to occur within the typical nesting bird season (February 1 to September 15). A qualified biologist with familiarity and knowledge of the identification, life history, and ecological requirements of special-status avian species will conduct pre-activity surveys prior to work in priority work areas. Because of the wide variety of birds with potential to nest in the Project footprint, nests could occur in a wide variety of locations including on the ground, in grassland, on mats in a wetland, in shrubs, trees, cliffs, on buildings, or rocky outcrops. Direct impacts to nesting bird could occur by crushing or destroying nests, force-fledging nestlings before completion of nestling period. Indirect impacts to nesting birds could occur by drawing attention to visual predators through the removal of vegetative cover around a nest which had hidden nests from predators and provided ample cover for parents to sneak on and off active nests, removal of food base (seeds, insects, fruit, rodents, etc.). Indirect impacts could also include loss of habitat for nesting and resources for foraging.

Adverse effects on nesting birds can be avoided by conducting initial treatments between September 1 and December 31, outside of the nesting bird season (February 1 to August 31). Initial and maintenance treatments, including manual and mechanical treatment activities, may be conducted during portions of the nesting bird season. These activities could result in direct loss of active nests or disturbance to active nests from auditory and visual stimuli (e.g., heavy equipment, chain saws, vehicles, personnel), potentially resulting in abandonment and loss of eggs or chicks. If treatments would occur during the nesting season, then SPR BIO-12 would apply, and a survey for common nesting birds would be conducted within the treatment areas by a qualified biologist prior to treatment activities. If no active bird nests are observed during focused surveys, then additional mitigation would not be required. If active nests of common birds or raptors are observed during focused surveys, disturbance to the nests would be avoided by establishing an appropriate buffer around the nests, modifying treatments to avoid disturbance to the nests, or deferring treatment until the nests are no longer active as determined by a qualified biologist.

The Project is designed to avoid riparian habitat and type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and no new roads will be created (SPR HYD-2). Pre-treatment surveys would be combined



with a focused nesting survey during nesting season (SPR BIO-10) to nests within the Project footprint and at minimum 50-foot buffer. Nesting bird surveys will occur no more than 7 days prior to work to ensure that no nests will be disturbed during vegetation management work. If work pauses for more than 7 days, a follow-up survey will be conducted prior to the restarting of work. Appropriate survey areas will be determined by the qualified biologist depending on the project footprint, type of activity proposed, and suitable habitat for nesting birds. Surveys will be conducted during periods of high bird activity (i.e., 1-3 hours after sunrise and 1-3 hours before sunset). If the qualified biologist determines that visibility is significantly obstructed due to on-site conditions (e.g., access issues, rain, fog, smoke, or sound disturbance [including high wind]), surveys will be deferred until conditions are suitable for nest detection. Should the biologist encounter an active nest of a migratory bird species, the biologist will establish an avoidance buffer of at least 50 feet (SPR AD-2) until the nest is fledged and inactive.

Crew members and contractors would be trained to identify and avoid raptor nests if encountered (SPR BIO-2) and a biological monitor will be present on site to provide guidance as needed. 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. 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 ground-supporting burrows for prey species such as insects and small mammals, and would reduce the potential for indirect impacts to this species. During prescribed herbivory activities, a wildlife-friendly fencing will be installed that will allow perching by avian species and prevent electrocution (SPR BIO-11). Per CDFW recommendations MOFD would implement a 10-acre buffer around active peregrine falcon nests, and an 8-acre buffer around active golden eagle nests within which no treatment activities will occur during the critical period, defined as February 1st to April 1st (extended to July 15 for occupied nests) for peregrine falcon, and January 15th to April 15th (extended to September 1st or until birds have fledged for occupied nests) for the golden eagle.

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, the implementation of 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, strategic native vegetation removal to retain habitat function and prevent type conversion, and restricting treatment activities to non-nesting season as possible avoid impacts to nest success and prey base. With these additional focused MMs, impacts to nesting birds would be reduced to less than significant. This impact is consistent with the CalVTP PEIR.

Impacts to Special-Status Bats: Pallid Bat and Townsend's Big-Eared Bat

Bats are classified as non-game indigenous mammals and are protected by a variety of legislation and regulations through several agencies, including the CDFW. Where protected bats may occur, qualified biologists will conduct focused surveys and/or mitigation for impacts to bats. Two bat species that are both CSSC, pallid bat and Townsend's big-eared bat, may occur within the Project area. Some bat species, including Townsend's big-eared bat, that utilize caves, mines, tunnels, buildings, or bridges



would not be impacted by manual vegetation removal. Loud mechanical equipment used within the shaded fuel break could impact bat species roosting in buildings or structures in the area. Tree removal activities could impact colonial bat species such as the pallid bat, which select a variety of trees and roost features, including cavities, crevices, and deep fissures in the wood or bark of trees and/or exfoliating bark. Smoke from pile burning could also impact roosting bats by disturbing them during sleep, breeding, or hibernation. Depending on the species present, the size of the roost, the type of roost (e.g., maternity, day, night, hibernation), and the season when tree removal would occur, the removal of trees could affect bats through removal of the roost and injury to bats.

The Project is designed to avoid riparian habitat and type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and no new roads will be created (SPR HYD-2). Pre-treatment surveys would be combined with a bat roost survey (SPR BIO-10). SPR BIO-10 requires focused surveys when working in potentially suitable habitat for special status species, which includes roosting bats and during maternity roosting season (April to July 31). Due to the difficulty of detecting bats during traditional daytime surveys, bat surveys will focus on identifying potential bat habitat and roosting structures. Roosting habitat typically includes old buildings, bridges and culverts, large trees greater than 12 inches diameter at breast height, and large rock features such as cliffs, caves, and mines. If these structures occur in project areas, a qualified bat biologist may conduct a Level 1 survey for evidence of bat occupation, specifically looking for signs of day-roosting bats, fecal matter, staining, and carcasses. These surveys can be performed year-round. Based on the results of Level 1 surveys, day and night emergence Level 2 surveys may be performed (April 1 to September 15), or bat exclusion or MMs taken.

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: 1) careful blockage of all openings that are large enough to allow bats to enter, and 2) 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 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.

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 which could impact insects which are bat prey base.

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, the implementation of 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, strategic



native vegetation removal 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. With these additional focused MMs, impacts to special status bats would be reduced to less than significant. This impact is consistent with the CalVTP PEIR.



Impacts to San Francisco Dusky-Footed Woodrat

The San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*; SFDFW) is a California species of special concern. It is one of 11 subspecies of dusky-footed woodrats living in the west. It is a medium-sized, native rodent with large ears and a long, scantily haired tail. SFDFW inhabit oak and riparian woodlands with a well-developed understory as well as chaparral scrub habitats, where their conical stick nests are often visible. These nests may be as much as 6 feet tall and can occur on the ground and in the canopy. Woodrats exhibit high site fidelity, and their nests may last for several years. San Francisco dusky-footed woodrat is known to be locally present within the region. Woodrat nests were observed during reconnaissance surveys, and they are known within the Project area. Direct impacts could result in nest damage during manual or mechanical removal. Indirect impacts could include disturbing a woodrat from the safety of its nest putting at greater risk of predation.

The Project is designed to avoid riparian habitat, aquatic features, and protection zones (SPR HYD-4), type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and creation of new roads (SPR HYD-2). 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 ground-supporting nests occupied by SFDFW 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. SFDFW nests will be avoided entirely where possible. Nests that cannot be avoided by work will be given a 1-meter buffer. This buffer will include surrounding vegetation, including 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 safely disperse.

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 herbicide to avoid native plants, and will reduce the potential for impacts to habitat occupied by this species.

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, the implementation of MM 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 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.

Per CDFW recommendations the following additional measures would be implemented to further reduce impacts to woodrats:

- 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).
- 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.

With these additional MMs, impacts to San Francisco dusky-footed woodrat would be reduced to less than significant. This impact is consistent with the CalVTP PEIR.

Impacts to American Badger

American badger (*Taxidea taxus*) is a CSSC that occupies drier open stages of most shrub, forest, and herbaceous habitats with friable soils; they are also commonly associated with open grassland habitats. This species may occur within grassland habitats and the fringes of oakwood and scrub communities on site. Direct impacts could result during manual or mechanical vegetation removal due to degradation of habitat around an active underground burrow or crushing the burrow. Indirect impacts could include a reduction in their prey base through crushing burrows or habitat loss.

The Project is designed to avoid type-conversion of chaparral or coastal sage scrub (SPR BIO-5), and creation of new roads (SPR HYD-2). 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. This buffer 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 which 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).

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, the implementation of 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, strategic native vegetation removal 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 American badger 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.

4.5.4 Impact BIO-3: Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation that Leads to Loss of Habitat Function – Less Than Significant With Mitigation

The Biological Resources Report (Attachment B) identified 12 sensitive natural communities within the Project footprint:

71.060.17 *Quercus agrifolia* – *Arbutus menziesii* – *Umbellularia californica*

71.060.48 *Quercus agrifolia* – *Umbellularia californica*

32.060.21 *Baccharis pilularis* / (*Nassella pulchra* – *Elymus glaucus* – *Bromus carinatus*)

32.010.11 *Artemisia californica* – *Diplacus aurantiacus*

37.940.02 *Toxicodendron diversilobum* – *Artemisia californica* / *Leymus condensatus*



43.200.02 *Lupinus bicolor*

41.080.02 *Leymus triticoides* – *Bromus* spp. – *Avena* spp.

41.080.04 *Leymus triticoides* – *Carduus pycnocephalus* – *Geranium dissectum*

41.150.01 *Nassella pulchra* – *Lolium perenne* – (*Trifolium* spp.)

41.150.05 *Nassella pulchra* – *Avena* spp. – *Bromus* spp.

41.150.06 *Nassella pulchra* – *Erodium* spp. – *Avena barbata*

43.300.02 *Plagiobothrys nothofulvus* – *Castilleja exserta* – *Lupinus nanus*

Initial vegetation treatments and maintenance treatments could result in direct or indirect adverse impacts on sensitive habitats, including designated sensitive natural communities. Direct impacts on sensitive habitats include direct loss or degradation of habitat quantity or quality through vegetation removal. Indirect impacts include inadvertent introduction of invasive plant species or pathogens which would result in a habitat loss and degradation, and disturbance of the ecosystem through loss of species community members (flora or fauna) through repeated presence of human activities.

The potential for adverse effects to riparian or sensitive natural communities is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and intensity of disturbance resulting from implementing treatment activities are consistent with those analyzed in the PEIR. Impacts to special status wildlife would be reduced to less than significant with the following Standard Project Requirements and Mitigation Measures.

SPR AD-2: Delineate Protected Resources for Avoidance

SPR AD-3: Consistency with Local Plans, Policies, and Ordinances

SPR AD-5: Maintain Site Cleanliness

SPR BIO-1: Review and Survey Project-Specific Biological Resources and Determine whether avoidance is possible

SPR BIO-2: Require Biological Resource Training for Workers

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats and map locations

SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub

SPR BIO-6: Prevent Spread of Plant Pathogens

SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife

SPR HYD-4 Identify and Protect Watercourse and Lake Protection Zones

SPR BIO-3 requires a survey for sensitive vegetation communities 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 create scrub islands 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.

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, MM BIO-3a would be implemented. 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.

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

The impact of the proposed Project is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR. Impacts would be less than significant with mitigation, consistent with the PEIR.

4.5.5 Impact BIO-4: Substantially Affect State or Federally Protected Wetlands – Less Than Significant With Mitigation

Aquatic resources were identified within the Project footprint as blue-line waters and ponds. Initial vegetation and maintenance treatments could result in direct or indirect adverse effects on state or Federally protected wetlands. The potential for adverse effects to wetlands is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and intensity of disturbance resulting from implementing treatment activities are consistent with those analyzed in the PEIR. Impacts to wetlands would be reduced to less than significant with the following Standard Project Requirements and Mitigation Measures.

SPR AD-2: Delineate Protected Resources for Avoidance

SPR AD-3: Consistency with Local Plans, Policies, and Ordinances

SPR AD-5: Maintain Site Cleanliness

SPR BIO-9: Prevent Spread of Invasive Plants, Noxious Weeds, and Invasive Wildlife

SPR HAZ-5: Spill Prevention and Response Plan

SPR HAZ-6: Comply with Herbicide Application Regulations

SPR HYD-1: Comply with Water Quality Regulations



SPR HYD-2: Avoid Construction of New Roads

SPR HYD-3: Water Quality Protections for Prescribed Herbivory

SPR HYD-4: Identify and Protect Watercourse and Lake Protection Zones

SPR HYD-5: Protect Non-Target Vegetation and Special-status Species from Herbicides

The aquatic habitat in the vicinity of the Project area has been excluded from the Project area during design of the treatments, and riparian habitat will be avoided at a minimum standard 50-foot buffer. Implementation of water quality protections in accordance with SPR HYD-1, identification of Watercourse and Lake Protection Zones (WLPZs) 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. With implementation of the SPRs described above, impacts to state and Federally protected wetlands and riparian corridors from the treatment Project would be less than significant with mitigation incorporated.

MM BIO-4: Avoid State and Federally Protected Wetlands

Even following the above SPRs, project impacts could still be considered potentially significant. Therefore, the implementation of MM BIO-4 would be implemented. Avoidance of state and Federally protected wetlands, per MM BIO-4, would ensure no impacts to wetlands in the identified features. With implementation of the above listed SPRs and MMs, riparian habitat and sensitive natural communities would be retained. These impacts were found to be within the scope of the PEIR, and treatment activities proposed are consistent with those analyzed in the PEIR.

4.5.6 Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries – Less Than Significant With Mitigation

The treatment areas have the potential to provide essential connectivity areas for wildlife. However, no known wildlife nursery sites or indications of nursery sites, such as deer-fawning habitat or potential rookery trees with whitewash, were identified within the Project area during the reconnaissance survey. Habitat within the treatment area may be used for movement (e.g., mule deer migration) and protective cover for common wildlife species. Noise during work may impede some movement, but work is generally within close proximity to urban landscapes and wildlife inhabiting the area are likely habituated to regular noise disturbance. Tree limb removal, hazardous tree removal, and ground-disturbing activities have the potential to impact nursery sites for native wildlife. Use of noise-generating equipment could disturb roosting birds and bats, impeding use of nursery sites.

Manual, mechanical, prescribed burning, and prescribed herbivory treatments could result in some limited direct or indirect adverse effects on wildlife corridors and nurseries. The potential for treatment activities to result in impacts to special wildlife corridors and nurseries was examined in the PEIR and was found to be less than significant with mitigation.



Due to the history of fire suppression and dense understory vegetative growth throughout much of the Project footprint, it is expected that wildlife corridors for some species would be improved by the treatment activities. By minimizing the potential for catastrophic wildfire and thereby protecting the forest ecosystem, the wildlife corridors, while slightly degraded in the short term, would be protected from high-intensity wildfire in the future. Implementation of the SPRs and MMs listed below would minimize changes in habitat function within treatment areas that serve as wildlife-movement corridors.

SPR AD-2: Delineate Protected Resources for Avoidance

SPR AD-3: Consistency with Local Plans, Policies, and Ordinances

SPR AD-5: Maintain Site Cleanliness

SPR BIO-1: Review and Survey Project-Specific Biological Resources and Determine whether avoidance is possible

SPR BIO-2: Require Biological Resource Training for Workers

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats and map locations

SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub

SPR BIO-10: Survey for Special-Status Wildlife and Nursery Sites

SPR BIO-11: Install Wildlife-Friendly Fencing during Prescribed Herbivory

SPR HYD-4: Identify and Protect Watercourse and Lake Protection Zones

SPR HYD-5: Protect Non-Target Vegetation and Special-status Species from Herbicides

Existing habitat would remain to permit movement of wildlife species. Vegetation management activities would not block or obstruct streams or creeks. SPR BIO-10 would generally apply to many areas where special-status species could occur. During prescribed herbivory activities, a wildlife-friendly fencing will be installed that will allow safe passage for common wildlife across the landscape (SPR BIO-11). With implementation of the above listed SPRs, areas of intact wildlife corridors would be retained. These impacts were found to be within the scope of the PEIR, and treatment activities proposed are consistent with those analyzed in the PEIR.

MM BIO-5: Retain Nursery Habitat and Implement Buffers to Avoid Nursery Sites

Even following the above SPRs, wildlife nursery sites could still be significantly impacted if not avoided. Therefore, the implementation of MM BIO-5 would be implemented. If wildlife nursery sites are identified during surveys conducted pursuant to SPR BIO-10, MM BIO-5 would apply. This MM requires that nursery habitat be marked for avoidance during treatment activities and a non-disturbance buffer be installed around the nursery site if activities are required to occur while the site is active or occupied.

Impacts would be less than significant with mitigation, consistent with the PEIR.



4.5.7 *Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife – Less Than Significant*

Initial vegetation treatment activities and treatment maintenance activities could result in direct or indirect adverse effects resulting in reduction of habitat or abundance of common wildlife, including nesting birds, because habitat suitable for these species is present throughout treatment areas.

The potential for adverse effects to special-status wildlife species is within the scope of the activities and impacts addressed in the PEIR because the treatment activities and intensity of disturbance resulting from implementing treatment activities are consistent with those analyzed in the PEIR. Impacts to special status wildlife would be reduced to less than significant with the following Standard Project Requirements and Mitigation Measures (Attachment A). In addition to the CalVTP PEIR SPRs and MMs, additional Project-specific measures are described below each applicable measure.

SPR AD-2: Delineate Protected Resources for Avoidance

SPR AD-3: Consistency with Local Plans, Policies, and Ordinances

SPR AD-5: Maintain Site Cleanliness

SPR BIO-1: Review and Survey Project-Specific Biological Resources and Determine whether avoidance is possible

SPR BIO-2: Require Biological Resource Training for Workers

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats and map locations

SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub

SPR BIO-12: Protect Common Nesting Birds, Including Raptors through the use of avoidance buffers, treatment modification, or treatment delay. Monitor Active Raptor Nest During Treatment and Retain Raptor Nest Trees

Regarding general common wildlife, implementation of SPR BIO-1, SPR BIO-2, SPR BIO-3, and SPR BIO-5 would limit the loss and degradation of high-quality habitat for common species within the Project site. SPR BIO-2 would require worker training in sensitive biological resources; SPR BIO-3 would ensure mapping of sensitive habitats; SPR BIO-5 would result in avoidance of type-conversion in scrub habitats. Therefore, Project treatment would remove vegetation and alter habitat structure locally but would not result in permanent habitat degradation or conversion.

The potential for adverse effects on common wildlife, including nesting birds, is within the scope of the PEIR because the treatment activities and extent of expected disturbance as a result of implementing vegetation treatments, including maintenance treatments, are consistent with those analyzed in the PEIR. The implementation of SPRs BIO-1, BIO-2, BIO-3, BIO-5, and BIO-12, in addition to measures described for special status species under Impact BIO-1, BIO-2, BIO-3, and BIO-5, would reduce the risk of this Project, resulting in less than significant adverse effects to habitat and the abundance of common wildlife.



The potential for treatment activities, including maintenance treatments, to result in adverse effects on these resources was examined in the PEIR and was found to be less than significant.

4.5.8 Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources – No Impact

Local policies or ordinances would apply to resources that occur within the proposed Project area, particularly tree ordinances or noise ordinances. The potential for treatment activities to result in conflict with local policies or ordinances was examined in the PEIR. The potential for the proposed Project to conflict with local policies or ordinances is within the scope of the activities and impacts addressed in the PEIR because the treatment projects implemented under the CalVTP are required to comply with any applicable county, city, or other local policies, ordinances, and permitting procedures related to protection of biological resources.

SPR AD-3: Consistency with Local Plans, Policies, and Ordinances

Additionally, SPR AD-3 (Consistency with Local Plans, Policies, and Ordinances) requires that the Project proponent design and implement the treatment in a manner that is consistent with applicable local plans (e.g., general plans), policies, and ordinances to the extent the Project is subject to them. (See Section 4: Regulatory Setting for more information.) Impacts would be less than significant and consistent with the PEIR.

4.5.9 Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan – No Impact

The CalVTP recognized eight (8) HCPs and/or NCCPs in the planning or implementation phase in the Central California Coast Section. In addition, the EBMUD Low Effect East Bay HCP also lies within the Central California Coast Section and within proximity to the Project area. The proposed Project, including the areas outside the Treatable Landscape, does not fall within the boundaries of any of the nine (9) HCPs/NCCPs. The proposed Project does not fall under the jurisdiction of any known HCPs or NCCPs; therefore, this impact does not apply to the treatment areas.



4.6 Geology, Soils, Paleontology, and Mineral Resources

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact GEO-1: Result in Substantial Erosion or Loss of Topsoil	LTS	Impact GEO-1, pp. 3.7-26 – 3.7-29	Yes	GEO-1 through GEO-7, AQ-3, AQ-4, HYD-3, HYD-4	NA	LTS	No	Yes
Impact GEO-2: Increase Risk of Landslide	LTS	Impact GEO-2, pp. 3.7-29 – 3.7-30	Yes	GEO-1, GEO-3, GEO-4, GEO-7, AQ-3	NA	LTS	No	Yes
¹ NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.								
New Geology, Soils, Paleontology, and Mineral Resource Impacts: Would the treatment result in other impacts to geology, soils, paleontology, and mineral resources that are not evaluated in the CalVTP PEIR?					<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion	
					Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.6.1 Discussion

The Project area is located in Contra Costa County, within the Southern Coast Ranges Geomorphic Province, which is characterized by northwest trending mountain ranges and valleys. The Coast Ranges are primarily composed of Jurassic- to Cretaceous-age (about 65-150 million years old) marine sedimentary and volcanic rocks of the Franciscan assemblage. The Franciscan assemblage consists of partially metamorphosed greenstone, basalt, chert, and graywacke that originated as sea floor sediments. The California Department of Conservation Landslide Inventory map was reviewed to identify unstable areas within or in proximity to the treatment areas. No historic or active landslides have been documented within the treatment areas (California Department of Conservation 2015). Soils within the treatment areas are dominated by Los Osos clay loam, 30 to 50 percent slopes (53 percent), Los Osos clay loam, 15 to 30 percent slopes (10 percent), and Millsholm loam, 20 to 60 percent slopes, moist, Major Land Resource Area (MLRA) 15 (16 percent) (National Resource Conservation Service [NRCS] 2023). The parent material for these soils consists of sandstone and shale, and these soils are well drained (NRCS 2023). The erosion hazard for the dominant soils is moderate to high (US Department of Agriculture 1977). No mechanical treatment would occur on slopes greater than 50 percent.



Impact GEO-1

The proposed Project would include mechanical treatments, manual treatments, prescribed herbivory, herbicide application, and prescribed burning. These treatment activities would result in vegetation removal and soil disturbance, which has the potential to increase rates of erosion and loss of topsoil. The potential for these treatment activities to result in substantial erosion or loss of topsoil was examined in the PEIR and found to be less than significant. The potential impacts are within the scope of the PEIR because the treatment activities are consistent with those analyzed in the PEIR. The implementation of the following SPRs would further minimize the risk of soil disturbance and loss of topsoil associated with treatment activities: SPR GEO-1, which requires the suspension of soil disturbing treatment activities during precipitation; SPR GEO-2, which limits high ground pressure vehicles that could cause soil disturbance or compaction on wet or saturated soils; SPR GEO-3, which requires stabilization of disturbed soil areas during treatment activities; SPR GEO-4, which requires inspection of the treatment area for proper erosion control measures prior to the rainy season and immediately following the first large rainfall event; SPR GEO-5, which requires stormwater to be drained via water breaks to decrease the potential for channelized erosion down linear treatment areas; SPR GEO-6, which minimizes the burn pile size to minimize the spatial extent of soil damage; SPR GEO-7, which minimizes erosion from use of heavy equipment and prescribed herbivory on slopes; SPR HYD-3, which requires environmentally sensitive areas to be identified and excluded from prescribed herbivory; SPR HYD-4, which requires establishment of WLPZs to reduce erosion near streams; PR AQ-3, which requires preparation of a Burn Plan and minimization of soil burn severity to reduce the potential for runoff and soil erosion; and SPR AQ-4, which requires wetting of unpaved dirt roads to control dust.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the slopes and soil characteristics of the Project area are essentially the same within and outside the treatable landscape and SPRs would be implemented as described above. Therefore, the potential impact related to soil erosion is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact GEO-2

The proposed Project would include treatment activities that would result in the reduction of vegetative cover and affect root structure, decreasing the stability of slopes, which could increase the risk of landslide. The potential for treatment activities to increase the risk of landslides was examined in the PEIR and found to be less than significant. This impact is within the scope of the PEIR because the extent of vegetation removal, intensity of prescribed burning, and required avoidance of steep slopes and areas of instability are consistent with those analyzed in the PEIR. In addition, the implementation of SPRs, including SPR GEO-1, which requires the suspension of soil disturbing treatment activities during precipitation; SPR GEO-3, which requires the stabilization of disturbed soil during treatment activities; SPR GEO-4, which requires inspections for proper erosion control measures; SPR GEO-7, which minimizes erosion by prohibiting heavy equipment and prescribed herbivory on steep slopes; and SPR



AQ-3, which minimizes soil burn severity resulting in some vegetation remaining with root structures, would minimize the potential for landslides from treatments.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the Project area, the range of slopes and landslide conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape. Therefore, the potential impact related to landslide risk is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Geology, Soils, Paleontology, and Mineral Resource Impacts

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



4.7 Greenhouse Gas Emissions

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact GHG-1: Conflict with Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs	LTS	Impact GHG-1, pp. 3.8-10–3.8-11	Yes	None	NA	LTS	No	Yes
Impact GHG-2: Generate GHG Emissions through Treatment Activities	PSU	Impact GHG-2, pp. 3.8-11–3.8-17	Yes	AQ-3	GHG-2	SU	No	Yes
¹ NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.								
New GHG Emissions Impacts: Would the treatment result in other impacts to GHG emissions that are not evaluated in the CalVTP PEIR?					<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion	
					Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.7.1 Discussion

Impact GHG-1

Vegetation treatments would involve manual and mechanical vegetation removal, prescribed herbivory, and herbicide application, and biomass disposal would include chipping and pile burning, both of which would generate some greenhouse gas (GHG) emissions. Consistency of treatments under the CalVTP with applicable plans, policies, and regulations aimed at reducing GHG emissions was examined in the PEIR and found to be less than significant. The Project would be consistent with the applicable policies, plans, and regulations to reduce GHG emissions as described in California’s 2022 Climate Change Scoping Plan (CARB 2022), the California Forest Carbon Plan (Forest Climate Action Team 2018), and the Draft California 2030 Natural and Working Lands Climate Change Implementation Plan (CARB 2019). It would also be consistent with the 2015 Contra Costa County Climate Action Plan (Contra Costa County and Michael Baker International 2015), which contains GHG reduction strategies and policies and details impacts of worsening wildfires on public health. Additionally, it would be consistent with the Contra Costa County General Plan (Contra Costa County 2005), which contains goals and policies relating to fire protection and wildland fire prevention through the use of controlled burns, fuel removal, and fuel breaks. Impacts related to GHG emissions from these types of treatment activities are within the scope of the PEIR because the proposed activities, as well as the associated equipment, duration of use, and



resultant GHG emissions are consistent with those analyzed in the PEIR, which were found to be less than significant. SPR GHG-1 is not applicable to the proposed project, as the Project is not subject to the requirement to provide information to inform reporting under the Board of Forestry and Fire Protection's AB 1504 Carbon Inventory Process because this Project is not a registered offset project. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

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

Impact GHG-2

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

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, GHG emissions and associated climate change impacts are global in nature and are not contained within the boundary of the treatable areas. Therefore, the GHG impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Impacts Related to GHG Emissions

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



and determined they are consistent with the applicable regulatory and environmental conditions presented in the CalVTP PEIR (Section 3.8.1, Regulatory Setting, and Section 3.8.2, “Environmental Setting” in Volume II of the Final PEIR).

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent of the PEIR. However, the same plans, policies, and regulations adopted to reduce GHG emissions apply in the areas outside the treatable landscape as within it. Likewise, the climate conditions are the same within the treatable landscape as they are just outside of it for this Project. Therefore, impacts of the proposed project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. No new impact related to GHG emissions would occur.



4.8 Energy Resources

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact ENG-1: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy	LTS	Impact ENG-1, pp. 3.9-7–3.9-8	Yes	NA	NA	LTS	No	Yes
¹ NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.								
New Energy Resource Impacts: Would the treatment result in other impacts to energy resources that are not evaluated in the CalVTP PEIR?					<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion	
					Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant	
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.8.1 Discussion

Impact ENG-1

The use of vehicles and mechanical equipment during initial treatment and treatment maintenance activities would result in the consumption of energy in the form of fossil fuels. The use of fossil fuels for equipment and vehicles was examined in the PEIR and found to be less than significant. The consumption of energy during implementation of the treatment project is within the scope of the PEIR because the types of activities, as well as the associated equipment and duration of proposed use, are consistent with those analyzed in the PEIR. Diesel and petroleum-based fuels, such as gasoline, would be consumed from the use of heavy-duty equipment and trucks, mechanical equipment, and the transport of personnel and equipment to and from and within the Project site. The primary objective of the Project is to reduce and manage wildfire hazard risk, intensity, and potential rate of spread. Wildfire response requires an immediate response from emergency personnel and mobilization of equipment from across the state and even across the nation, which often results in inefficient consumption of energy. Implementation of treatment activities would reduce wildfire risk and the intensity of fire responses.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing environmental and regulatory conditions are essentially the same within and outside the treatable landscape, and the types of treatment activities and associated use of energy are of the same scale and



scope as analyzed in the PEIR; therefore, the energy impact is also the same. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

New Energy Resource Impacts

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



4.9 Hazardous Materials, Public Health, and Safety

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact HAZ-1: Create a Significant Health Hazard from the Use of Hazardous Materials	LTS	Impact HAZ-1, pp. 3.10-14–3.10-15	Yes	HAZ-1, HAZ-5	NA	LTS	No	Yes
Impact HAZ-2: Create a Significant Health Hazard from the Use of Herbicides	LTS	Impact HAZ-2, pp. 3.10-15–3.10-18	Yes	HAZ-5, HAZ-6, HAZ-7, HAZ-8, HAZ-9	NA	LTS	No	Yes
Impact HAZ-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites	PS	Impact HAZ-3, pp. 3.10-18–3.10-19	Yes	NA	HAZ-3	LTS	No	Yes

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

New Hazardous Materials, Public Health, and Safety Impacts: Would the treatment result in other impacts related to hazardous materials, public health and safety that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion
	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.9.1 Discussion

Impact HAZ-1

The Project would involve mechanical treatments, manual treatments, prescribed herbivory, herbicide application, and prescribed burning. These activities would require the use of various types of equipment and vehicles, which require the use of fuels, oils, and lubricants, which are hazardous materials. The potential for treatment activities to cause a significant health hazard from the use of hazardous materials was analyzed in the PEIR and the impacts were found to be less than significant. This impact is within the scope of the PEIR because the types of treatments and associated equipment and types of hazardous materials that would be used are consistent with those analyzed in the PEIR. All equipment associated with the proposed project would comply with SPR HAZ-1, which ensures that equipment is properly maintained to minimize leaks. SPR HAZ-5 also ensures that proper spill prevention measures would be implemented on-site to prevent impacts related to the accidental leak or spill of hazardous materials. Herbicide application impacts are discussed under Impact HAZ-2, below.



The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, regulatory conditions and the use of hazardous materials are essentially the same within and outside the treatable landscape. Therefore, the impact related to the use of hazardous materials is also the same. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HAZ-2

The Project would include herbicide application to control species that increase wildfire hazards. Herbicide application would involve transportation, use, storage, and disposal of herbicides, which could result in risks related to human exposure when applied in areas in close proximity to the public. However, only ground-level application would occur; no aerial spraying of herbicides would occur. The potential for treatment activities to create a significant health hazard from the use of herbicides was analyzed in the PEIR and the impacts were found to be less than significant. The potential impacts related to the use of herbicides during treatment activities are within the scope of the activities and impacts discussed within the PEIR because the types of herbicides (e.g., glyphosate) and application methods that would be used, which are limited to ground-based applications, are consistent with those analyzed in the PEIR. Herbicides may be applied directly (by hand or backpack sprayer) to invasive plants and noxious weeds to minimize the spread and eliminate re-sprouting of invasive species to reduce wildfire risk within the treatment areas. Under the CalVTP, herbicide treatments would be limited to ground-level application and must comply with all EPA label directions as well as be applied by licensed applicators in compliance with all laws and regulations. The Project would comply with SPR HAZ-5 through HAZ-9, which requires preparation of a Spill Prevention and Response Plan prior to any herbicide treatment activities to provide protection to workers, the public, and the environment from accidental spills or leaks of herbicides; compliance with herbicide application regulations to protect worker and public safety; triple rinsing herbicide containers and disposal of rinsed materials at an approved site and disposal of all herbicides following label requirements and waste disposal regulations; minimization of herbicide drift into public areas through application parameters such as limitations for nozzle pressure and nozzle distance from vegetation; and notification of herbicide application within 500 feet of public areas by posting signs at herbicide treatment areas.

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



Impact HAZ-3

The Project would include mechanical treatments that could result in ground disturbance, which could expose workers, the public, or the environment to hazardous materials if a contaminated site is present within the Project area. Additionally, prescribed burning activities could lead to unexpected ignitions should ignitable hazardous waste be present, which could expose workers to risks associated with unexpected fire or explosions. The potential for the treatment activities to encounter contaminated sites that could expose workers, the public, or the environment to hazardous materials was examined in the PEIR, and was identified as potentially significant. This impact was identified as potentially significant in the PEIR because hazardous materials sites could be present within treatment sites, and soil disturbance or burning in those areas could expose people or the environment to hazards. In evaluating the potential for effects related to the proposed project, database searches for hazardous materials sites within the Project area were conducted as directed by MM HAZ-3. Several hazardous materials sites were identified within 0.25 mile of the treatment project area, listed below (Department of Toxic Substances Control [DTSC] 2022a; SWRCB 2022).

- Gateway Valley (07990004) was identified within approximately 0.16 mile of the treatment Work Area 3 in Wilder. This site is largely undeveloped area mainly used for cattle grazing; however, it was previously used as a landfill and four acres were identified as containing construction and household debris. The site was certified as cleaned up in 1997 (DSTC 2022b).
- Exxon (T0601300119) was identified within approximately 0.06 mile of treatment Work Area 4 at the intersection of Moraga Road and Rheem Boulevard. A leaking underground storage tank (LUST) was identified on-site, potentially contaminating groundwater with gasoline; however, the site was cleaned up and the case was closed in 1997 (SWRCB 2022a).
- Tosco Facility #3937 (T0601300339) was identified within approximately 0.07 mile of treatment Work Area 4 at the intersection of Center Street and Rheem Boulevard. A LUST was identified on-site, potentially contaminating groundwater with waste oil, motor oil, and hydraulic or lubricating fluid; however, the site was cleaned up and the case was closed in 2015 (SWRCB 2022b).
- Shell (T0601300267) was identified within approximately 0.06 mile of treatment Work Area 4 near the intersection of Center Street and Rheem Boulevard. A LUST was identified, potentially contaminating groundwater with gasoline; however, this site was cleaned up and the case was closed in 2000 (SWRCB 2022c).
- Rheem Theater (T0601300605) was identified within approximately 0.15 mile of treatment Work Area 4 on Rheem Boulevard. A LUST was identified, potentially contaminating groundwater with gasoline; however, this site was cleaned up and the case was closed in 1997 (SWRCB 2022d).
- Rheem Valley Shopping Center (T010000012758) was identified within approximately 0.24 mile of treatment Work Area 4 along Center Street. Before the site was developed as a



shopping center, the site was used as a dry cleaner and is potentially contaminated with chlorinated solvents. Groundwater, soil, and air are currently being monitored per direction from the RWQCB in June 2022 (SWRCB 2022e).

- Acalanes Union High School Facility (T0601300731) was identified within approximately 0.15 mile of treatment Work Area 4 along Moraga Road. A LUST was identified, potentially contaminating groundwater with gasoline; however, the site was cleaned up and the case was closed in 2012 (SWRCB 2022f).
- St. Mary's College (T1000000904) was identified within approximately 0.19 mile of treatment Work Area 4 at St. Mary's College along De La Salle Drive. A LUST was identified, potentially contaminating the site with oil and petroleum; however, the site was cleaned up and the case was closed in 2017 (SWRCB 2022g).
- St. Mary's College (Saint Joseph's Hall) (T10000010124) was identified within approximately 0.16 mile of treatment Work Area 4 at St. Mary's College along De La Salle Drive. A LUST was identified, potentially contaminating the site with diesel, gasoline, and petroleum; however, the site was cleaned up and the case was closed in 2022 (SWRCB 2022h).

None of the listed hazardous sites are located within the treatment areas and a majority of the sites have been cleaned up and the cases closed. In addition, the proposed project would not involve ground disturbance outside of the Project area that would have the potential to disturb contaminated sites. Therefore, this impact is less than significant. No SPRs are applicable to this impact and no additional mitigation is required.

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

New Hazardous Materials, Public Health, and Safety Impacts

The Project is consistent with the treatment types and activities considered in the CalVTP PEIR. The project proponent has considered all site-specific characteristics of the proposed project and determined that they are in compliance with the applicable environmental and regulatory setting conditions presented in the CalVTP PEIR (Volume II, 3.10.1 and 3.10.2). The project proponent has also determined that the inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the Project area, the existing environmental and regulatory conditions pertinent



to hazardous materials that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape. Therefore, the impacts are the same and the impacts of the proposed project are also consistent with those covered in the PEIR. No changed circumstances would create new significant impacts not addressed in the PEIR and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to hazardous materials, public health, or safety would occur.



4.10 Hydrology and Water Quality

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

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

New Hydrology and Water Quality Impacts: Would the treatment result in other impacts to hydrology and water quality that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion
	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



4.10.1 Discussion

Impact HYD-1

The Project's initial and maintenance treatments would include prescribed burning. Ash and debris from treatment areas could be washed by runoff into adjacent drainages and streams. The potential for prescribed burning activities to cause runoff and violate water quality regulations or degrade water quality was examined in the PEIR and was found to be less than significant. This impact is within the scope of the PEIR because the use of pile burning and low-intensity prescribed burns and associated impacts to water quality are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are AD-3, AQ-3, HYD-1, HYD-4, HYD-6, and GEO-4 through GEO-7. SPR AD-3 requires that the treatment design be consistent with local plans, policies, and ordinances, and SPR AQ-3 requires a Burn Plan. SPRs GEO-4 through GEO-7 require erosion monitoring, draining stormwater with water breaks where appropriate, and minimizing burn pile size. SPRs HYD-1, HYD-4, and HYD-6 require that the treatments comply with the water quality regulations, WLPZs ranging from 50 to 150 feet be implemented for watercourses that are within treatment areas, and burn piles are located outside of WLPZs.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. The Rheem Valley portion of Work Area 4 contains two mapped unnamed tributaries that are not within the treatable landscape. One of these tributaries drains to Las Trampas Creek, which is located within the treatable landscape immediately upstream and downstream of the confluence with this creek. The second unnamed tributary runs through and adjacent to a small portion of Work Area 4 before entering a culvert for over 1 mile. The after daylighting, the tributary passes through the treatable landscape downstream in the vicinity of Work Area 2, and eventually drains to San Leandro Creek. However, within the boundary of the Project area, the surface water conditions are essentially the same within and outside the treatable landscape; therefore, the water quality impact from prescribed burning is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HYD-2

This Project would include mechanical and manual treatments. WLPZs ranging from 50 to 150 feet would be implemented for any watercourses that are within treatment areas pursuant to SPR HYD-4. The potential for mechanical and manual treatment activities to violate water quality regulations or degrade water quality was examined in the PEIR and was found to be less than significant. This impact is within the scope of the PEIR because the use of heavy equipment and handheld tools to remove vegetation and associated impacts to water quality are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are AD-3, HYD-1, HYD-2, HYD-4, HYD-6, GEO-1 through GEO-4, GEO-7, BIO-1, and HAZ-1. SPRs AD-3, HYD-1, HYD-4, HYD-6, and GEO-4 through GEO-7 are described under Impact HYD-1. SPRs GEO-1 through GEO-3 require the suspension of soil disturbing treatment activities during



precipitation, limit high ground pressure vehicles that could cause soil disturbance or compaction on wet or saturated soils, and require stabilization of disturbed soil areas during treatment activities. SPR HYD-2 ensures that the construction of new roads would be avoided. SPR BIO-1 requires the review and survey of specified biological resources, including riparian areas. SPR HAZ-1 requires that all equipment be maintained and regularly inspected for leaks.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. As described in Impact HYD-1, the Rheem Valley portion of Work Area 4 is further from the treatable landscape than the other Work Areas. However, within the boundary of the Project area, the surface water conditions are essentially the same within and outside the treatable landscape; therefore, the water quality impact from manual and mechanical treatments is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HYD-3

Project treatments would include prescribed herbivory to reduce fuel loads and may be used for treatment maintenance or as a pre-treatment before implementation of other methods. The prescribed herbivory livestock used as part of the proposed project would typically involve use of cattle, goats, and sheep but, under the CalVTP, could also include horses and may require the installation of temporary fencing where natural barriers are not present. The use of temporary water facilities for the livestock and guard animals and/or shepherd, as well as other temporary infrastructure (e.g., tanks, corrals, fences), may be required with the use of prescribed herbivory as a treatment method. Site preparation could involve installation of a portable electric fence to contain the livestock. The potential for prescribed herbivory treatment activities to violate water quality regulations or degrade water quality was examined in the PEIR and was found to be less than significant. SPRs applicable to this treatment are AD-3, BIO-1, BIO-4, BIO-5, GEO-1, GEO-3, GEO-4, GEO-7, HYD-1, HYD-2, HYD-3, HYD-4, HYD-6, and HAZ-1. All applicable SPRs listed, except SPRs BIO-4, BIO-5, GEO-3, and HYD-3, are described in Impact HYD-1 and Impact HYD-2. SPRs BIO-4 and BIO-5 require that treatment design avoid loss of riparian habitat function and avoid the type conversion of chaparral and coastal sage scrub habitat. SPR GEO-3 requires stabilization of soil disturbed during prescribed herbivory treatments, and HYD-3 requires various water quality protections for prescribed herbivory treatments. These SPRs avoid and minimize the risk of substantial water quality degradation by implementation of prescribed herbivory treatment, making the impact less than significant.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. As described in Impact HYD-1, the Rheem Valley portion of Work Area 4 is further from the treatable landscape. However, within the boundary of the Project area, the surface water conditions are essentially the same within and outside the treatable landscape; therefore, the water quality impact from prescribed herbivory treatments is



also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HYD-4

Project treatments could include targeted herbicide application to kill, or prevent regrowth of, invasive plants and noxious weeds. No aerial spraying of herbicides would occur. Herbicides would be applied in adherence with all US EPA, California Environmental Protection Agency (CalEPA), and California Department of Pesticide Regulation regulations. The use of herbicides has the potential to violate water quality standard regulations or degrade water quality, which was examined in the PEIR, and was found to be less than significant. SPRs applicable to this treatment are AD-3, BIO-1, BIO-4, GEO-1, HAZ-1, HAZ-5, HAZ-6, HAZ-7, HYD-1, HYD-4, and HYD-5. All applicable SPRs listed, except SPRS HYD-5, HAZ-5, HAZ-6, and HAZ-7, are described in Impacts HYD-1 through Impact HYD-3. SPR HYD-5 prohibits non-aquatic herbicide formulations from being applied within 50 feet of a waterbody or riparian area and prohibits application during precipitation or within 24 hours of forecasted precipitation. SPRs HAZ-5, HAZ-6, and HAZ-7 ensure that a spill prevention and response plan is implemented, that herbicide application regulations are followed, and that herbicide containers are triple rinsed. These SPRs avoid and minimize the risk of substantial water quality degradation by implementation of herbicide treatment, thereby making the impacts less than significant.

The inclusion of land in the Project that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. As described in Impact HYD-1, the Rheem Valley portion of Work Area 4 is further from the treatable landscape than other Work Areas. However, within the boundary of the Project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they have similar environmental conditions and the same regulatory setting. Potential impacts outside the treatable area are within the scope of the activities and impacts addressed in the PEIR because the methods of herbicide application, transportation, storage, and disposal are consistent with those analyzed in the PEIR with implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact HYD-5

Some of the Project treatments could cause ground disturbance and minor erosion, which could directly or indirectly modify existing drainage patterns. The potential for treatments to violate water quality standard regulations or degrade water quality was examined in the PEIR, and the impacts were found to be less than significant. As described in the PEIR, these activities would have minor impacts to on-site drainage with implementation of SPRs. The potential impacts are within the scope of the activities and impacts addressed in the PEIR because the use of equipment and treatment activities are consistent with those analyzed in the PEIR. SPRs applicable to this treatment are AD-3, BIO-4, GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-6, GEO-7, HYD-1, HYD-2, HYD-4, and HYD-6. All applicable SPRs listed are



described in Impacts HYD-1 through HYD-4. These SPRs would avoid and minimize the risk of substantial altering of the existing drainage pattern, thereby making the impacts less than significant.

The inclusion of land that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the Project area, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, and existing drainage patterns pass through both areas. Therefore, the impact related to alteration of site drainage patterns is also the same. The potential for those treatments to substantially alter the existing drainage patterns of a Project site was evaluated in the PEIR and was found to be less than significant with implementation of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Hydrology and Water Quality Impacts

The proposed treatments are consistent with the treatment types and activities addressed in the PEIR. The site-specific characteristics of the proposed treatment Project are consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (Sections 3.11.1, “Regulatory Setting” and 3.11.2, “Environmental Setting” in Volume II of the Final PEIR). The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the hydrology, water quality, and treatment methods are consistent with those analyzed in the PEIR; thus, they are also within the scope of the PEIR. Additionally, the existing environmental and regulatory conditions pertinent to hydrology and water quality are also consistent within as well as outside of the treatable landscape included in this Project area. No changed circumstances would create new significant impacts not addressed in the PEIR and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to hydrology and water quality would occur.



4.11 Land Use and Planning, Population, and Housing

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

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

New Land Use and Planning, Population, and Housing Impacts: Would the treatment result in other impacts to land use and planning, population and housing that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion		
	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

4.11.1 Discussion

Impact LU-1

Initial treatment and treatment maintenance activities would take place on land owned and/or managed by private landowners in and adjacent to the City of Orinda, the Town of Moraga, and the unincorporated Contra Costa County. Landowners include the East Bay Municipal Utility District (EBMUD), Bigbury Company, John Muir Land Trust, and Pacific Gas and Electric (PG&E). As described in Section 4.5, Biological Resources, SPR AD-3 (Consistency with Local Plans, Policies, and Ordinances) requires that the Project proponent design and implement the treatment in a manner that is consistent with applicable local plans (e.g., general plans), policies, and ordinances to the extent the Project is subject to them. As described in Section 4.12, Noise, treatment activities would occur during daytime hours consistent with the local ordinances of the Town of Moraga, City of Orinda, and Contra Costa County. The potential for treatment activities to cause a significant environmental impact due to the conflict with a land use plan, policy, or regulation was evaluated in the PEIR and was found to be less than significant. The potential for vegetation treatment activities to cause a significant environmental impact is within the scope of the PEIR because the treatment types and activities are consistent with those evaluated in the PEIR. SPR AD-3 is applicable to the proposed project, and it requires proposed Project treatments to be consistent with local plans, policies, and ordinances.



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

Impact LU-2

The PEIR evaluated the potential for initial treatments and maintenance treatments to result in substantial population growth as a result of increases in demand for employees, which was found to be less than significant. Impacts associated with a short-term increase in the demand for workers during construction of the treatment project are within the scope of the PEIR because the number of workers required for the proposed project is consistent with the crew size analyzed in the PEIR for the types of treatments proposed.

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

New Land Use and Planning, Population, and Housing Impacts

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



4.12 Noise

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact NOI-1: Result in a Substantial Short-Term Increase in Exterior Ambient Noise Levels During Treatment Implementation	LTS	Impact NOI-1, pp. 3.13-9–3.13-12; Appendix NOI-1	Yes	AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, NOI-6	NA	LTS	No	Yes
Impact NOI-2: Result in a Substantial Short-Term Increase in Truck-Generated Single-Event Noise Levels During Treatment Activities	LTS	Impact NOI-2, p. 3.13-12	Yes	AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, NOI-6	NA	LTS	No	Yes
¹ NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.								
New Noise Impacts: Would the treatment result in other noise-related impacts that are not evaluated in the CalVTP PEIR?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion		
				Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant		
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

4.12.1 Discussion

Impact NOI-1

The Project treatment activities that have the potential for short-term increase in ambient noise level include manual treatments and ground-based mechanical treatments. Prescribed herbivory would potentially occur 24 hours a day, but as noted in the PEIR, prescribed herbivory would not require the use of heavy off-road equipment; noise generated by this treatment type would be negligible and it is not discussed further. The manual treatments for this Project include hand-operated power tools, and the mechanical treatments include but are not limited to skidders, chippers, and masticators. Manual and mechanical treatments would occur on weekdays between 7:00 a.m. and 7:00 p.m., during daylight hours only. When work would be conducted within a jurisdiction with more restrictive noise ordinances (Table 3), manual and mechanical treatments would be conducted within the allowable hours for noise-generating activities. Work would be conducted over several months each year. Multiple crews may be working at the same time and using mechanical and manual methods that may generate varying noise levels, temporarily increasing ambient noise in the vicinity. Due to the nature of the proposed project, private residences and other noise-sensitive land uses are adjacent to the Project area and would



temporarily be exposed to noise. The proposed Project would fall within several city/town jurisdictions and Contra Costa County. The potential for treatment activities to cause substantial short-term increases in exterior ambient noise level was addressed in the PEIR and was found to be less than significant. This impact is within the scope of the PEIR because the types of treatments and associated equipment, and thus the noise generated, is consistent with those analyzed in the PEIR. SPRs applicable to the proposed project include AD-3, which requires the treatments to be consistent with local plans, policies, and ordinances. Manual and mechanical treatments would be within the Contra Costa County construction noise requirements, which state that construction activities should occur during normal work hours and non-noise-sensitive times of day. Table 3 summarizes the noise ordinances of the local jurisdictions, demonstrating all work would be within the allowable limits, per SPR AD-3. Additional SPRs applicable to the proposed project include NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6. SPRs NOI-1 through NOI-6 would require that heavy equipment be used only during daytime hours, all equipment be properly maintained, engine shrouds be closed during mechanical equipment operation and idle time be restricted to 5 minutes, all staging areas be placed away from noise sensitive land types, and any noise sensitive receptors be notified ahead of work to ensure impacts to ambient noise levels would be less than significant.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. While most Project Work Areas contain portions of the CalVTP treatable landscape, the Rheem Valley area (Work Area 4), does not heavily overlap the treatable landscape and portions of it are located over 1 mile from the nearest treatable landscape. However, the existing environmental conditions present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they would be subject to the same noise ordinances and would have similar noise-sensitive receptors. Therefore, the noise impact is also the same, as described above. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

Impact NOI-2

Project treatment activities would require large trucks to haul equipment and crews to the Project site. While trucks would pass residential sensitive receptors, it is not anticipated that Project traffic would result in a substantial increase in truck-generated noise along local roads. These large trucks have the potential for a substantial short-term increase in single event noise levels (SENL), but trucks would only be in use during work hours from 7:00 a.m. to 7:00 p.m., Monday through Friday, in compliance with local noise ordinances (see Impact NOI-1). The SENL describes a receiver's cumulative noise exposure from a single impulsive noise event (e.g., an automobile passing by or an aircraft flying overhead), which is defined as an acoustical event of short duration and involves a change in sound pressure above some reference value. The impacts are within the scope of the PEIR because the treatment activities and methods are the same as those analyzed in the PEIR. SPRs applicable to this treatment are AD-3, NOI-1, NOI-2, NOI-3, NOI-4, NOI-5, and NOI-6, described under Impact NOI-1. The potential for a substantial



short-term increase in SENL during the Project treatments was evaluated in the PEIR and was found to be less than significant with the implementation of these SPRs.

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. As described in Impact NOI-1, the Rheem Valley area (Work Area 4), does not heavily overlap the treatable landscape and it is further from the treatable landscape than other maintenance areas. For much of the Project area, the existing roadway network and access roads used by the worker vehicles and trucks for hauling would be the same to reach the treatable landscape inside the CalVTP as outside the CalVTP. For portions of the Project area, like the Rheem Valley area, that are further from CalVTP treatable landscape areas, the types of sensitive receptors located along existing roads and access roads would be the same as those covered in the PEIR. Therefore, the noise impact is also the same as described above and would be less than significant with the application of the same SPRs. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Noise Impacts

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

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing environmental and regulatory conditions pertinent to noise that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as previously described. The proposed Project is consistent with the types of projects covered in the PEIR. No changed circumstances would lead to new significant impacts not addressed in the PEIR. Therefore, no new impact related to noise would occur that is not analyzed in the PEIR.



4.13 Recreation

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact REC-1: Directly or Indirectly Disrupt Recreational Activities within Designated Recreation Areas	LTS	Impact REC-1, pp. 3.14-6–3.14-7	Yes	REC-1	NA	LTS	No	Yes
¹ NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.								
New Recreation Impacts: Would the treatment result in other impacts to recreation that are not evaluated in the CalVTP PEIR?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion		
				Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant		
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

4.13.1 Discussion

Impact REC-1

Initial treatment and treatment maintenance activities would take place on land owned and/or managed by private landowners in and adjacent to the City of Orinda, the Town of Moraga, and the unincorporated Contra Costa County. Landowners include the East Bay Municipal Utility District (EBMUD), Bigbury Company, John Muir Land Trust, St. Mary’s College, and Pacific Gas and Electric (PG&E). Some portions of the Project area are designated by the relevant jurisdictions as open space. Access to some treatment areas would rely on fire trails, which are sometimes used as recreational trails. The potential for treatment activities to directly or indirectly disrupt recreational activities within designated recreation areas was evaluated in the PEIR and was found to be less than significant. The potential for vegetation treatment and maintenance activities to cause a significant environmental impact is within the scope of the PEIR because the treatment types and activities are consistent with those evaluated in the PEIR. SPR AD-3 is applicable to the proposed project, and it requires proposed Project treatments to be consistent with local plans, policies, and ordinances relevant to recreation, which include general plans, zoning ordinances, and adopted policies to avoid conflicts with recreational uses. SPR REC-1 is applicable to the proposed project, and it requires the project proponent to coordinate with the owner/manager of any recreation area or facility that would be temporarily closed during treatment activity, including posting notifications at least 2 weeks prior to the commencement of the treatment activities. The potential for the proposed treatment Project to impact recreation is within the scope of the PEIR and would be less than significant because the treatment activities and intensity are consistent with those analyzed in the PEIR.



The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the availability of recreational resources within the Project area is essentially the same as outside the treatable landscape because the areas are near to each other, and the recreational users would be the same. Impacts to recreation would be the same as previously described and would be less than significant. Implementation of SPRs AD-3 and REC-1 would minimize disruption to recreational activities within the Project area. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than covered in the PEIR.

New Recreation Impacts

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

The inclusion of land in the proposed treatment area that is outside the treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the Project area, the existing environmental conditions pertinent to recreation that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as described previously. The proposed Project is consistent with the types of projects covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts. Therefore, no new impact related to recreation would occur.



4.14 Transportation

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact TRAN-1: Result in Temporary Traffic Operations Impacts by Conflicting with a Program, Plan, Ordinance, or Policy Addressing Roadway Facilities or Prolonged Road Closures	LTS	Impact TRAN- 1, pp. 3.15-9–3.15-10	Yes	AD-3, TRAN-1	NA	LTS	No	Yes
Impact TRAN-2: Substantially Increase Hazards due to a Design Feature or Incompatible Uses	LTS	Impact TRAN- 2, pp. 3.15-10–3.15-11	Yes	AD-3, TRAN-1	NA	LTS	No	Yes
Impact TRAN-3: Result in a Net Increase in VMT for the Proposed CalVTP	PSU	Impact TRAN- 3, pp. 3.15-11–3.15-13	Yes	NA	None	LTS	No	Yes

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

New Transportation Impacts: Would the treatment result in other impacts to transportation that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion
	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.14.1 Discussion

Impact TRAN-1

Initial treatment and treatment maintenance activities would take place within the Town of Moraga, City of Orinda, and unincorporated Contra Costa County. The Project would require limited vehicular traffic along public roadways used to access existing fire roads and trails leading to the specific treatment areas. Project-related traffic would include heavy-vehicle trips to haul equipment and materials and worker commute trips to and from the treatment areas. Initial treatment would likely involve more heavy equipment than subsequent maintenance. Crew sizes may vary but would not be more than 45 workers. Work would occur on weekdays between 7:00 a.m. and 7:00 p.m., during daylight hours only; therefore, the increase of vehicle traffic on the surrounding local roads would occur before 7:00 a.m. and after 7:00 p.m. The number of truck trips and worker vehicle trips to and from the Project area would vary based on the size of the area being treated, the type of treatment being implemented, and the duration of the vegetation treatments. No road closures would be necessary for



the implementation of this Project. The potential for a temporary increase in vehicle traffic associated with the proposed project work to conflict with a program, plan, ordinance, or policy addressing roadway facilities, or for prolonged road closures, was examined in the PEIR and found to be less than significant. The proposed temporary increases in traffic related to the Project is within the scope of the PEIR because the treatment duration and limited number of vehicles (e.g., fire engine, water tender, masticator transport, crew vehicles for crew members) associated with the proposed treatments are consistent with those analyzed in the PEIR. The proposed treatments would not all occur concurrently and increases in vehicle trips associated with the treatments would be dispersed on multiple roads, including local roads. SPRs applicable to this treatment are AD-3 and TRAN-1. Implementing SPR AD-3 requires the treatments to be consistent with local plans, policies, and ordinances, and SPR TRAN-1 would require that the project proponent implement a traffic management plan (TMP) and that traffic control measures be placed on affected roadways during Project treatment activities.

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

Impact TRAN-2

The Project treatment activity that would have the potential to increase transportation hazards during proposed treatment and maintenance activities would be the use of prescribed and pile burning, due to the smoke produced, which could temporarily affect visibility on nearby roadways. The potential for smoke to affect visibility along roadways during implementation of prescribed and pile burning was examined in the PEIR and was found to be less than significant. Vegetation piles for burning would typically be 4 feet in diameter and 4 feet in height, and would not exceed 20 feet in diameter. Piling burning and would be conducted in compliance with CAL FIRE and BAAQMD Regulation 5 for open burning and burn day restrictions. MOFD would report site conditions and request approval to burn through PFIRS, which serves as an interface between air quality managers, land management agencies, and individuals that conduct prescribed burning in California. SPRs applicable to this treatment are AD-3 and TRAN-1, described under Impact TRAN-1. The project proponent would prepare and implement a TMP to avoid and minimize temporary transportation impacts under this SPR. Therefore, the Project treatment activities would not substantially increase hazards due to a design feature or incompatible uses, and impacts would be less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.



The Project area includes land that is outside the CalVTP treatable landscape. While this constitutes a change to the geographic area considered in the PEIR, the existing environmental conditions for the land outside the treatable landscape and on the land inside the treatable landscape are essentially the same. While most project Work Areas contain portions of the CalVTP treatable landscape, the Rheem Valley area (Work Area 4) does not heavily overlap the treatable landscape and portions of it are located over 1 mile from the nearest treatable landscape. However, the existing transportation conditions (e.g., roadways, road use) present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they continue beyond the treatable landscape. Therefore, the potential to increase hazards is the same for Project areas outside the CalVTP treatable landscape as for areas within the treatable landscape. As a result, the impact to increased hazards is also the same and within the scope of the PEIR. The Project would result in a less-than-significant impact related to increasing road hazards and would not result in a more significant impact than covered in the PEIR.

Impact TRAN-3

The Project treatments could temporarily increase vehicle miles traveled (VMT) above baseline conditions because the Project access locations are in semi-remote locations along fire roads and other small, local roadways, and thus vehicle trips would be required to access the treatment areas. Project-related traffic would include heavy-vehicle trips to haul equipment and materials as well as worker commute trips to and from the treatment areas. The number of truck trips and worker vehicle trips to and from the Project area would vary based on the size of the area being treated, the type of treatment being implemented, and the duration of the vegetation treatments. This impact was identified as potentially significant and unavoidable in the PEIR because implementation of the CalVTP would result in a net increase in VMT. However, as stated in Impact TRAN-3 of the PEIR, individual projects under the CalVTP are likely to generate fewer than 110 trips per day, which is expected to cause a less-than-significant transportation impact for specific later activities, as described in the *Technical Advisory on Evaluating Transportation Impacts* published by the Governor's Office of Planning and Research (Governor's Office of Planning and Research 2018). According to the analysis methodologies presented in the PEIR, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact. As presented in the PEIR, this amount would allow for up to 50 vehicles bringing crews and equipment to and from the Project site and hauling materials away in a single day. Because of the small sizes of the crews needed for the proposed project (not more than 45 workers), the limited equipment needed, and the limited materials to be hauled in any one day, the total VMT would not exceed 110 trips per day. Initial treatment would likely involve more vehicle trips than subsequent maintenance. Additionally, all vehicle trips would be dispersed across multiple roadways and would likely only utilize particular roadways a few times and for short durations. As a result, impacts related to a potential increase in VMT would be less than significant. Hiring local contractors would be encouraged where feasible to reduce the amount of VMT. MM AQ-1 from the PEIR would not apply to the impact because the impact is less than significant.



The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the existing transportation conditions (e.g., roadways, road use) present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape because they continue beyond the treatable landscape. Therefore, the transportation impact identified in the PEIR for individual projects is also the same, as described above, and would be less than significant. The most VMT would occur at the beginning and end of the Project within each Work Area to haul equipment in and out of the Project area. Daily VMT would consist of crew transportation to and from the site and, potentially, hauling removed material. No SPRs apply to this impact, nor would MM AQ-1 apply, as the impact would be less than significant.

New Impacts on Transportation

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

The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, within the boundary of the Project area, the existing environmental conditions pertinent to transportation that are present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as previously described. The proposed Project is consistent with the types of projects covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impact. Therefore, no new impact related to transportation would occur.



4.15 Public Services, Utilities, and Service Systems

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact UTIL-1: Result in Physical Impacts Associated with Provision of Sufficient Water Supplies, Including Related Infrastructure Needs	LTS	Impact UTIL-1, p. 3.16-9	Yes	NA	NA	LTS	No	Yes
Impact UTIL-2: Generate Solid Waste in Excess of State Standards or Exceed Local Infrastructure Capacity	PSU	Impact UTIL-2, pp. 3.16-10–3.16-12	Yes	AD-3, UTIL-1	NA	LTS	No	Yes
Impact UTIL-3: Comply with Federal, State, and Local Management and Reduction Goals, Statutes, and Regulations Related to Solid Waste	LTS	Impact UTIL-2, p. 3.16-12	Yes	AD-3, UTIL-1	NA	LTS	No	Yes
¹ NA: not applicable; there are no SPRs and/or MMs identified in the PEIR for this impact.								
New Public Services, Utilities, and Service System Impacts: Would the treatment result in other impacts to public services, utilities and service systems that are not evaluated in the CalVTP PEIR?				<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion		
				Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant		
				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

4.15.1 Discussion

Impact UTIL-1

The proposed Project would involve manual treatment, ground-based mechanical treatment including mastication, chipping, and broadcasting, prescribed herbivory, pile burning, prescribed (broadcast) burning, and targeted herbicide use, and biomass disposal including lopping and scattering, hauling off-site, and pile burning. A minimal amount of water would be required for fire suppression during prescribed and pile burning activities and for dust control during mechanical treatments. Depending on the location of the prescribed burning, pile burning, or mechanical treatments, water would be supplied via nearby fire hydrants or be transported via fire trucks. The potential increased demand for water was examined in the PEIR and was found to be a less than significant impact. This impact is within the scope of the activities and impacts addressed in the PEIR because the amount of water needed for prescribed burning, pile burning, and dust control, and the water source type are consistent with those analyzed in the PEIR. The water would be a minimal demand on local water providers. Implementation of the



Project treatments would not result in a physical impact associated with provision of sufficient water supplies, including related infrastructure needs, and this impact would be less than significant. No SPRs are applicable to this impact. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

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

Impact UTIL-2

Manual and mechanical treatments would generate biomass as a result of vegetation removal within the Project treatment areas. Biomass generated by mechanical and manual treatments would be processed by chipping and hauling, chipping and broadcasting, or pile burning. The chipped biomass would be broadcast on-site, with chipped materials applied and spread to less than 4 inches in depth to minimize wildfire risk. The remaining biomass that could not be broadcast on site would be hauled off site to the Central Contra Costa Solid Waste Authority or another appropriate biomass processing facility. The potential to generate solid waste in excess of state standards was examined in the PEIR and was found to be a less-than-significant impact. SPRs AD-3 and UTIL-1 would apply to this potential impact. SPR AD-3 requires the project proponent to design and implement the Project consistent with local plans and ordinances, and SPR UTIL-1 requires the project proponent to prepare a Solid Organic Waste Disposition Plan to guide biomass disposal. The potential biomass impact is within the scope of the activities and impacts identified in the PEIR as the conditions for removing biomass are consistent with the analysis in the PEIR.

The PEIR found that while some localities within the state may currently have the requisite infrastructure to process woody biomass or may develop this capacity in the near future, it cannot be guaranteed that all localities across the state would develop the capacities to process excess solid organic waste produced from treatment activities within the timeframes of the proposed activities. Therefore, because feasible mitigation is not available, and to not risk understating potential future impacts in light of uncertainties about market response, the PEIR classified this impact as potentially significant and unavoidable, notwithstanding the possibility that capacity could increase with the scale of treatments such that it would not be exceeded for most or all individual treatments. However, the Central Contra Costa Solid



Waste Authority and other biomass processing facilities are available in Contra Costa County. Therefore, the impact on solid waste disposal is less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe impact than identified in the PEIR.

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the land included has essentially the same environmental conditions as those assessed within the treatable landscape, and so would result in a similar amount of biomass material for disposal and would use the same local facilities for disposal. The same SPRs would be implemented to ensure consistency with local plans and ordinances and ensure implementation of a Solid Organic Waste Disposition Plan. Therefore, the impact generated from solid waste in excess of state standards outside the treatable landscapes is less than significant. This proposed Project reflects a lesser impact than the statewide program, and the determination is consistent with the PEIR and would not constitute a substantially more severe impact than identified in the PEIR.

Impact UTIL-3

Project treatments as a result of vegetation removal within the Project site would generate biomass, which would be disposed of by pile burning, chipping and broadcasting, or chipping and hauling. The potential to conflict with federal, state, and local waste management requirements was examined in the PEIR and was found to be a less-than-significant impact. The biomass that remains after pile burning and broadcasting would be transported to the Central Contra Costa Solid Waste Authority or another biomass processing facility. The Project would be in compliance with federal, state, and local goals related to solid waste, as required by SPR AD-3. The Project would apply SPR UTIL-1, which requires implementation of a Solid Organic Waste Disposition Plan. The Project is within the scope of activities and impacts identified in the PEIR.

The inclusion of land outside the treatable landscape constitutes a change to the geographic extent of the PEIR. However, the environmental conditions outside the treatable landscape are essentially the same as those within the treatable landscape because they are near or adjacent to the treatable landscape, would generate a similar amount of solid waste, and would use the same waste disposal facilities. Therefore, the impact related to compliance with federal, state, and local goals and regulations regarding solid waste is less than significant. This determination is consistent with the PEIR and would not constitute a substantially more severe significant impact than what was covered in the PEIR.

New Impacts on Public Services, Utilities, and Service Systems

The proposed treatments are consistent with the treatment types and activities considered in the PEIR. The site-specific characteristics of the proposed treatments have been considered and found to be consistent with the applicable environmental and regulatory conditions presented in the CalVTP PEIR (refer to Sections 3.16.1, “Environmental Setting” and 3.16.2, “Regulatory Setting” in Volume II of the Final PEIR). The inclusion of land in the proposed treatment area that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the conditions



present in the areas outside the treatable landscape are essentially the same as those within the treatable landscape, as described above. Therefore, the impacts of the Project are also consistent with those covered in the PEIR. No changed circumstances are present, and the inclusion of areas outside of the CalVTP treatable landscape would not give rise to any new significant impacts not addressed in the PEIR. Therefore, no new impact related to public service, utilities, and service systems would occur that is not covered in the PEIR.



4.16 Wildfire

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered in the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project ¹	List MMs Applicable to the Treatment Project ¹	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact WIL-1: Substantially Exacerbate Fire Risk and Expose People to Uncontrolled Spread of a Wildfire	LTS	Section 3.17.1; Impact WIL-1 pp. 3.17-14–3.17-15	Yes	HAZ-2, HAZ-3, HAZ-4	NA	LTS	No	Yes
Impact WIL-2: Expose People or Structures to Substantial Risks Related to Postfire Flooding or Landslides	LTS	Section 3.17.1; Impact WIL-2 pp. 3.17-15–3.17-16	Yes	AQ-3, GEO-3, GEO-4, GEO-5	NA	LTS	No	Yes

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

New Wildfire Impacts: Would the treatment result in other impacts related to wildfire that are not evaluated in the CalVTP PEIR?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	If yes, complete row(s) below and discussion	
	Potentially Significant	Less Than Significant with Mitigation Incorporated	Less than Significant	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

4.16.1 Discussion

Impact WIL-1

The primary goal of the proposed project is to create and maintain a reduced fuel zone around the Cities of Orinda, the Town of Moraga, and the communities of Canyon, Eastport, and Valle Vista in Contra Costa County, south of Highway 24. The proposed Project would reduce excess and ladder fuels and would reduce and manage wildfire hazard risk, intensity, and potential rate of spread; reduce the impacts from wildfires on surrounding communities and critical infrastructure; and provide strategic locations to effectively fight wildfires.

Initial and maintenance treatments would include pile burning, prescribed (broadcast) burning, and mechanical treatments, which could result in temporary risks associated with uncontrolled wildfire, accidental wildfire ignition, or risk of a prescribed fire escaping its control lines. The potential increase in exposure to wildfire during implementation of treatments was examined in the PEIR and found to be less than significant. Increased wildfire risk associated with prescribed pile burning, prescribed burning, and use of heavy equipment in vegetated areas is within the scope of the PEIR. SPRs HAZ-2, HAZ-3, and HAZ-4 would be implemented to reduce the risk of exposure to wildfire by requiring spark arrestors on



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

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

Impact WIL-2

Initial and maintenance treatments would include prescribed pile burning, mechanical treatment using heavy equipment, and prescribed herbivory. The potential for post-fire flooding and erosion, including landslides, was examined in the PEIR and found to be less than significant. Mechanical treatment activities would occur predominantly on slopes below 40 percent grade and along ridges, and may occur on slopes greater than 40 percent grade with equipment that can reach target vegetation from existing road infrastructure. Mechanical treatments would not be applied on slopes above 50 percent.

Implementation of SPRs AQ-3 and GEO-3 through GEO-5 would reduce the risk of erosion and landslides post-prescribed burn and/or post-fire, in the event that a wildfire occurred as a result of the proposed treatments or an unrelated occurrence. Implementation of SPR AQ-3 would minimize soil burn severity during prescribed burns, which would help to retain vegetation to stabilize the soil. SPR GEO-3 requires stabilization of disturbed soil areas during treatment activities, SPR GEO-4 requires inspection of the treatment area for proper erosion control measures prior to the rainy season and immediately following the first large rainfall event, and SPR GEO-5 requires stormwater to be drained via water breaks to decrease the potential for channelized erosion within linear treatment areas. As described in Impact WIL-1, this Project intends to create and maintain a reduced fuel zone that would serve as an opportunity for fire resources to stop or slow the spread of wildfire, which may lead to smaller burn scars, or less area susceptible to post-fire flooding or erosion.

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



New Impacts to Wildfire

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



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