Geysers VTP # 2024-21

Project Specific Analysis and Addendum to the CalVTP PEIR

Prepared for:
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Common Terms and Acronyms Key:

RPF: Registered Professional Forester

SPR: Standard Project Requirements

PSA: Project Specific Analysis

PEIR: Program Environmental Impact Report

MMRP: Mitigation monitoring and reporting program (Attachment A)

MM: Mitigation measures

CalVTP: California Vegetation Treatment Program

CNDDB: California Natural Diversity Database

CNPS: California Native Plant Society

NACL: Native American Contact List

DBH: Diameter at Breast Height

SRA: State Responsibility Area

WLPZ: Watercourse and Lake Protection Zone

TPA: Trees per acre

PCA: Pest Control Advisor

QAL: Qualified Applicator's License

LWD: Large Woody Debris. Existing downed logs which are highly valuable to wildlife.

Dead and Down: Vegetation that is dead and either in contact with the forest floor or standing.

% Canopy Cover: An average percentage of the sky that is covered by overstory or understory canopy as measured with a densitometer utilizing random plot survey methods.

% Live Crown = (Height of live crown / Total tree height) X 100

Lop and Scatter: Vegetation treatment technique where removed branches, shrubs, and trees are cut into manageable pieces and scattered around a treatment area to slowly break down into the ground over time.

Introduction

PROJECT OVERVIEW

The California Vegetation Treatment Program (CalVTP) directs implementation of vegetation treatments to reduce wildfire risk, while protecting natural resources and public property from wildfire. The Program Environmental Impact Report (PEIR) for the CalVTP was developed in 2019, under the direction of CEQA lead agency, California Board of Forestry and Fire Protection, in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines. This Project Specific Analysis (PSA) is prepared to assess vegetation treatments for the approximately 27,284 acres, located in Mendocino, Sonoma, and Lake Counties.

CEQA LEAD AGENCY AND PROPOSED PROJECT

Northern Sonoma County Fire Protection District will function as the lead agency, project proponent and also the implementing entity for this project. As such the NSCFPD is solely responsible for all vegetation treatments proposed and commissioned by them, including the implementation and monitoring of the mitigation measures, and Standard Project Requirements (SPRs) shown in attachment A. As Lead Agency, NSCFPD is responsible for making the final determination regarding this proposed projects CEQA compliance and the necessity or lack thereof for further environmental review.

The following PSA, and corresponding attachments, were prepared by Frontier Resource Management LLC. The treatment activities and treatment types were selected by the implementing entity for inclusion in this PSA. Frontier Resource Management LLC does not make the determination that the proposed treatment activities are within the scope of the PEIR, but rather provides the evaluation, surveys, and documentation required by CEQA for consideration by the lead agency. The Lead Agency is responsible for determining if the proposed treatments are within the scope of the PEIR, based on the information contained in this PSA and supporting attachments.

The treatment types being proposed are fuel breaks and ecological restoration. The treatment activities will include manual treatment, mechanical treatment, herbicide treatment, prescribed burning, and prescribed herbivory. Ongoing maintenance will involve the same treatment types as the initial treatments.

- *There are many private landowner's within the project area. The project proponent and lead agency are not responsible for the conduct of these landowners. The following mitigation measures and SPRs only apply to a project commissioned by the project proponent or lead agency.*

STATEMENT OF PURPOSE

This document serves as the PSA to determine if the project as proposed is within the scope of the CalVTP PEIR and to provide CEQA compliance for the proposed vegetation treatments. Approximately 30% of the project area falls outside of the "treatable landscape" or geographic extent of the PEIR. This area can be classified as an oak woodland and/or oak savannah forest type. These ecosystems, which function as transition zones between grasslands and mixed conifer forests, were mostly dis-included from the geographic extent, across the entire state. The CalVTP Treatable Landscape boundary was digitally developed at a large scale, which did not allow for high resolution mapping. As a result, areas were dis-included, even though the vegetation is very similar to the surrounding vegetation within the treatable landscapes. These areas need treatment, as they provide fuel ignition and transfer fire to the "treatable landscapes". The invasion of grasses into oak woodlands and oak savannahs has moved these areas into extreme fire danger, furthering the necessity for preventative treatments.

Due to the similarities of the areas outside of the treatable landscape, the environmental analysis in the PEIR is applicable. 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 a substantially more severe significant environmental impact, consistent with CEQA section 21166 and CEQA Guidelines Sections 15162, 15163, 15164, and 15168. In this case there are no revisions, only a change to the geographic extent represented by the PEIR.

This document serves as both the PSA and the Addendum to the CalVTP PEIR to provide CEQA compliance for the proposed vegetation treatments.

VEGETATION TREATMENT PLAN

This Vegetation Treatment Plan does not prescribe treatment specifications for each forested area, but rather gives a brief overview of current conditions and general goals. The project proponent & implementing entity shall consult with an RPF for the development of the treatment prescriptions for each forest type.

Treatment prescriptions and other "forestry services" for all "forested landscapes" must be developed by an RPF as required by Professional Foresters Law; Public Resources Code Sections 750 – 758. Forested landscapes are defined as,

> *"… those tree dominated landscapes and their associated vegetation types on which there is growing a significant stand of tree species, or which are naturally capable of growing a significant stand of native trees in perpetuity, and is not otherwise devoted to non-forestry commercial, urban, or farming uses."*

"Forestry" is defined as,

> *"…the science and practice of managing forested landscapes and includes, among other things, the application of scientific knowledge and forestry principles in the fields of fuels management and forest protection, timber growing, and utilization, forest inventories, forest economics, forest valuation and finance, and the evaluation of mitigation of impacts from forestry activities on watershed and scenic values…"*

PROJECT LOCATION

The 27,284-acre treatment area is situated roughly 12 air miles East of the city of Cloverdale, in Sonoma, Mendocino, and Lake Counties, CA. It has the following legal description: Section 6 T10N R7W, Sections 1, 4, & 5 T10N R8W, Sections 29, 30, 31, 32, & 33 T11N R7W, Sections 3, 4, 5, 6, 7, 8, 9, 10, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, & 36 T11N R8W, Sections 1, 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 23, 24, & 25 T11N R9W, Sections 18, 19, 30, 31, 32, 33 T12N R8W, Sections 24, 25, 26, 27, 28, 33, 34, 35, & 36 T12N R9W, MDBM within Kelseyville, Asti, The Geysers, Whispering Pines USGS 7.5 Minute Quadrangles. It spans from Hwy 175 in the East to Geysers Road in the West. The elevation ranges from 720 – 4720 ft above sea level.

CURRENT FOREST CONDITIONS

Due to the large size and variability of the project area, individual planning units have been developed. Boundaries for each planning unit have been determined based on existing roads, topography, watercourses, and vegetation. Many of the stands in the project area exhibit regions of poor forest health, due to overcrowded conditions, a high degree of dead and down, and lack of available nutrients. The following descriptions are based on initial reconnaissance and are not meant to be a comprehensive inventory of these different stand types. A more in-depth forest assessment should be conducted by an RPF prior to designing treatment specifics.

1A:

Unit 1A is 484 acres bordered by Big Sulphur Creek in the south, an unnamed fire road in the north, and a trending ridge to the northwest. The unit has a southwest aspect and spans from the ridge down to the watercourse. The southeast half of the unit burned in 2016, and the entire unit - except for the northern edge - burned in 2013. There is a low-moderate level of development; Seven-mile Rd runs through the middle of the unit, powerplant infrastructure is minimal. All the unit's watercourses flow to Big Sulphur Creek on the Southern edge which is a class 1 watercourse. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The primary vegetation types in this unit are annual grassland and oak woodland. The top of the ridge is early successional mixed hardwood with moderate 1 – 10 hour fuels. Primarily canyon oak (Quercus chrysolepis) and interior oak (*Quercus wislizeni).* Below this zone is a mosaic of annual grassland and oak woodland. Fuel hazard is low in this area with moderate ground fuel in denser areas and minimal ladder fuel. Dead and down is also minimal throughout the unit. The species found here are coast live oak (*Quercus agrifolia*), Oregon white oak (*Quercus garryana),* blue oak (*Quercus douglasii*), valley oak (Quercus lobata), California black oak (Quercus kelloggii), canyon oak, and interior oak. Other

species include grey pine (*Pinus sabiniana*), bay laurel (*Umbellularia californica*), and big-leaf maple (*Acer macrophyllum*).

1B:

Unit 1B is ~ 1267 acres bordered by Big Sulphur Creek in the south, Ottoboni Ridge Rd and D.X. Dr in the north, and Big Geysers Rd in the east. The unit has a south aspect. This planning unit has been affected by high severity fire across nearly the entire unit in 2013 and again in 2016. Smaller patches of the unit have burned in 1991, 2016, and 2021. There is a high amount of development and powerplant infrastructure, especially on the eastern side. Several springs are in this unit and all watercourses drain towards Big Sulphur Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed and overseen by an RPF.

Overall fire hazard at this site is low but elevation dependent like 1A. At the top of the site early successional hardwood is found with high densities of 1- 10 hour fuels and high TPA, contributing to a greater fire hazard. Moving down in elevation fuel hazard decreases, as mature hardwoods are found following creeks and draws. Many fire-killed hardwoods are present within the higher elevations of Unit 1B. The general age of vegetation is mixed with mature and early successional hardwoods as well as sparse levels of mature grey pine. Species consist of white oak, big leaf maple, fig (*Ficus carica*), bay laurel, grey pine, blue oak, interior live oak, coast live oak, red willow (*Salix laevigata*), knobcone pine (*Pinus attenuata*), white oak, and buckeye (*Aesculus californica*).

1C:

Unit 1C is 1594 Acres bordered by Ottoboni Ridge Rd in the north, Big Geysers Rd in the west, JD Kingcade Rd in the east, and Cobb Creek and Big Sulphur Creek to the south. The unit aspect varies from south, southwest, and southeast. Most of the entire unit has been heavily affected by high severity fire in the past 10 years, most notably in 2019. There is a lot of powerplant infrastructure in the unit and a moderate road density. The unit has a class 1 watercourse, Big Sulphur Creek, running along the southern border which all the unit's watercourses drain to. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

Dominant vegetation types in the unit are annual grassland, mixed hardwood, and chaparral. Draws feature moderate – high fire hazard with mixed hardwood dominated by interior oak. Ridgetops vary from low – high depending on vegetation age. Ridgetop vegetation is mixed hardwood, varying from mature to early successional blending into chaparral scrub. Patches of grassland are distributed throughout the unit. Dead and down is also present across the unit. Species present are interior live oak, canyon live oak, madrone (*Arbutus menziesii*), bay laurel, grey pine, valley oak, white oak, Northern California black walnut (*Juglans hindsii*), maple, buckeye, fig, narrow leaf willow (*Salix exigua*), ponderosa pine (*Pinus ponderosa*), eucalyptus (*Eucalyptus spp.*), and black oak.

2A:

Unit 2A is 670 acres bordered by Mayacamas Creek in the north and 7-mile Rd in the southeast. Its southern border is a ridge and unit 1A. The unit has a north to northwest aspect with a low level of development. The western third of the unit burned in 2013, and there has not been a fire since. All of the unit's watercourses drain towards Mayacamas Creek, a class 1 watercourse, eventually into Big Sulphur Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The overall fuel hazard is high due to dense early successional forest found throughout the site and high amounts of 1-hour and 10-hour fuels. Pockets of lower density fuels are found on the north facing aspect, these fuels consist of mature hardwoods following draws, which is then interspersed with early successional hardwoods acting as ladder fuels. This site has variable age classes present creating a nice mosaic of vegetation types. Species consist of Douglas-fir (*Pseudotsuga menziesii*), grey pine, leather oak (*Quercus durata*), bay laurel, canyon oak, madrone, black oak, white oak, buckeye.

2B:

Unit 2B is 892 acres bordered by Ottoboni Ridge Rd and D.X. Dr in the south, Mayacamas creek in the north, and 7-mile Rd in the west. The unit has a north aspect. The eastern third of the unit burned in 1952, and there has not been a fire since. Development in the unit is low with moderate road density.

All of the unit's watercourses drain towards Mayacamas creek. This unit will be treated with the ecological restoration treatment type, and specifics should be designed by an RPF.

The dominant forest type in this unit is early successional hardwood. This unit is growing dense with a generally uniform height and age. Douglas-fir and mature hardwood species are found in the draws. Standing dead is minimal. Fuel depth is variable with a high degree of 1-hour fuels and moderate 10-hour fuels present. Species composition is mostly interior live oak, leather oak, bay laurel, madrone. Other species include canyon live oak, Douglas-fir, white oak, knobcone pine, grey pine, big leaf maple, and nutmeg (*Torreya californica*).

2C:

Unit 2C is 474 acres situated north of Ottoboni Ridge Rd and D.X. Dr and south of Mayacamas Creek bordered by Lakeview Rd to the east. The unit has a north aspect except for the eastern tip which wraps around a draw. Nearly the entire unit burned in 1952 and has not burned since. There is low development within the unit, concentrated towards the top of the ridge. Road density is moderate and mostly bordering the unit but not bisecting. Mayacamas creek flows through the unit and along the border and is where all of the unit's watercourses drain to. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The forest types in this unit are a mix between mid-successional and mature hardwood and Douglas-fir. Fire hazard is moderate-high due to high amounts of ladder fuels and moderate 1-10 hour fuels present throughout the unit. 100-hour fuels and standing dead are found at lower elevations of the unit. Fuel load is contiguous over the site and does not vary like other units. Dominant species include bay laurel, Douglas-fir, big leaf maple, canyon oak, interior live oak, Pacific madrone, knobcone pine, coast live oak, and nutmeg.

3:

Unit 3 is 230 acres bordered by Big Sulphur Creek to the north and Cloverdale - Geysers Rd to the south. The unit has a north aspect and a class 1 watercourse running along the entire northern border which all of the units' watercourses flow into. The eastern side of the unit burned in 2013. Development and road density are minimal and there are many steep rugged sections, particularly near Big Sulphur Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

Overall, a moderate fuel hazard exists, as early successional hardwoods are found throughout, serving as ladder fuels for the mature hardwoods. 1 – 10 hour fuels, grasslands, and early successional hardwoods create a mosaic of fuel classes. The general age of the vegetation is mixed as there is mature hardwood and early successional hardwoods found here along with intermittent conifers. Species present are interior live oak, canyon live oak, bay laurel, big leaf maple, pacific madrone, black oak, valley oak, white oak, and coast live oak.

4:

Unit 4 is 352 acres between Burned Mountain Rd to the south and Cobb Creek to the north. It borders JD Kingcade Rd to the east and Big Sulphur Creek Rd to the west. The unit has a north facing aspect except for the southernmost tip which faces south. The eastern quarter of the unit burned in 2015, then the entire unit burned in 2019. There is moderate infrastructure development in this unit, primarily in the center. Cobb Creek runs along the entire unit and drains into Big Sulphur Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The eastern two thirds of the unit are mature mixed hardwood forest. Bay laurel is the dominant species here with Canyon live oak, interior live oak, madrone, maple, and Douglas-fir. Fuel hazard is high, tree crowns are contacting each other and there is a moderate degree of ladder fuels in the understory. Beginning at the western third of the unit there is a large patch of standing dead leather oaks from a previous disturbance blended into chaparral. The chaparral section has a high degree of dead and down which appears to be a blend of bay, toyon (*Heteromeles arbutifolia*), conifers, and chaparral species. Yerba santa (*Eriodictyon californicum*) and chamise (*Adenostoma fasciculatum*) are the dominant chaparral species. This portion of the unit past the transition has a South facing slope and is very patchy with grasses, chaparral species, hardwood and knobcone pine regeneration.

5:

Unit 5 is 898 acres with a mostly southwest facing aspect, spanning from JD Kingcade Rd and Burned Mountain Rd in the North to Big Sulphur Creek Rd in the south. Almost the entire unit burned in 1991 then again in 2015. Most recently the northwest half of unit burned in 2019. There is a moderate level of development, more so in the southwest portion surrounding plant 20. The western edge of the unit has a high level of geothermal activity including multiple fumaroles. It has a class 2 watercourse flowing through the unit and all watercourses in the unit drain to Big Sulphur Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The unit is mostly chaparral with yerba santa, ceanothus (*Ceanothus spp.),* Leather oak, manzanita (*Arctostaphylos spp.)*, buckbrush (Ceanothus cuneatus), Macnab cypress (Hesperocyparis macnabiana), and chamise as the dominant species. Species lean more chaparral on the western portion and top of the slope and more hardwood on the eastern side which did not burn as recently. There are a noticeable number of snags throughout the unit that appear to be either bay or conifer species. Bay regeneration dots the hillside surrounding the snags. There are also patches of very thick knobcone pine regeneration throughout the unit, generally below 7 feet in height. These patches vary in size and can be found across the entire unit, concentrated more in the eastern half. In the draws and on north facing slopes more mature mixed hardwood species can be found. Fuel hazard is high due to the pine regeneration and thickness of the chaparral. Ground fuels are minimal, in most places it is limited to a thin layer of dry twigs and grass on top of dry rocky soil.

6:

Unit 6 is 378 acres following the ridge between Socrates Mine Rd to the south, Fire Rd to the east, and JD Kingcade Rd on the west. The northern border is the unnamed road adjacent to powerplant 3. Most of the unit has a Southwest aspect with a small strip past the ridge facing northeast. The entire unit was affected by high severity fire in 2015. There is a moderate level of development, concentrated more on the northern and southern edges. Due to the ridgetop location of the unit only class 3 watercourses pass through it draining towards Big Sulphur Creek, however the east side of the ridge drains towards Anderson Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The unit has patches of two main forest types, chaparral and early successional mixed hardwood. Chaparral patches are dominant on the south facing slopes and are mostly comprised of chamise and buckbrush with canyon oak, bay laurel, yerba santa, manzanita, and deerbrush (Ceanothus integerrimus). Chaparral patches have moderate fuel hazard and almost no ground fuels. North facing slopes contain early successional mixed hardwood. The dominant species being canyon live oak, bay, madrone, and Douglas-fir. Fuel hazard is high in these areas due to dense canyon oak and a high degree of ladder fuels. Within this unit there are patches of knobcone pine regeneration ranging from 5 to 15 feet tall growing very dense with an extreme fuel hazard, there is standing dead conifer in these areas likely from previous disturbance. These areas cover most of the southern edge of the unit.

7:

Unit 7 is 341 acres bordered by Ridge Rd in the west, Davies Rd in the south, Verdant View Rd in the east, and Socrates Mine Rd in the north. Most of the unit has a northeast aspect except for the southwest section over the ridge which faces southwest. This area burned in 2004 and again in 2015. There is a moderate level of development. Pipes run along the road for much of the unit and there are several potential staging area options along the Southern edge however most have existing infrastructure. Most of the units' watercourses flow into Anderson Creek followed by Putah Creek; The southwest corner will drain towards Big Sulphur Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The dominant vegetation type in most of unit 7 is Chaparral. Fuel hazard is moderate and varied, some patches are very dense, and some are sparse and rocky, ground fuel is minimal. Species in chaparral areas include mountain mahogany (*Cercocarpus betuloides*), chamise, yerba santa, coyote brush (*Baccharis pilularis*), Canyon live oak, buckbrush, scrub oak (Quercus berberidifolia), deerbrush, leather oak, Jepson ceanothus (*Ceanothus jepsonii*), and various manzanita species. Ghost pine, knobcone pine, and ponderosa pine regeneration are mixed into the chaparral in some patches. In the draws and portions of the chaparral is mixed hardwood, which is largely early succession. Some standing dead hardwood and conifer is present throughout. Fuel hazard is high in the early mixed hardwood sections with more significant surface fuel. Species include madrone, canyon oak, black oak, and bay. The northernmost section which did not burn in 2004 is significantly different from the rest of

the unit. This area is mostly leather oak scrub, bay, dense knobcone pine regeneration, and Douglas-fir farther up the slope. This section has a high amount of standing dead conifer, but ground fuel is low due to the fire in 2015. The Southwest section past the ridge also differs from the rest of the unit, mainly because it didn't burn in the 2015 fire. This area has a significant Sargent cypress (*Hesperocyparis sargentii*) component with ghost pine and ponderosa pine throughout. Fuel hazard is moderate-high, ladder fuels are high, and ground fuel is a light mix of 1-100 hour fuels. This section has a large amount of serpentine soils, see attachment C maps.

8:
Unit 8 is 455 acres between Mayacamas Creek in the southeast, Wildhorse Creek in the east, and West Squaw Creek Rd to the northwest. The unit has a southeast aspect and does not have a recent fire history. Moderate road density is found throughout unit eight and low to moderate steam pipe density. Many staging areas were found within unit eight that can be used for operations. Alder Creek and Hummingbird Creek both run through the unit into Mayacamas Creek. All four creeks are tributary to Big Sulphur Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The dominant vegetation type in this unit is mixed hardwood with patches of grassland throughout. The eastern portion is a low fuel hazard grassland with patches of valley oak. Towards the east vegetation shifts toward mature mixed hardwood with a moderate fuel hazard due to increased vegetation density and ladder fuels. The easternmost portion is mature mixed hardwood with patches of chamise chaparral and grassland. This section has a moderate-high fuel hazard and notably higher 1-10 hour fuels than the rest of the unit. Standing dead is minimal throughout the unit and fuel depth varies with vegetation density. Species present are interior live oak, coast live oak, white oak, blue oak, California buckeye, grey pine, canyon live oak, bay laurel, and Pacific madrone.

9A:
Unit 9A is 202 acres bordered by Mayacamas Creek and Wildhorse Creek to the west, and 7 mile Rd and Coldwater Creek Rd to the east. The unit has an east aspect and does not have a recent fire history. There is a low density of steam pipes and roads, however, an unstable area is noted within this unit. All of the units watercourses flow either into Mayacamas Creek or Wildhorse Creek, its tributary. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The dominant forest type in this unit is mature oak woodland. Overall low-moderate fuel hazard was found in unit 9A due to the mature age class and general lack of ladder or ground fuels. The fuel loading is generally higher within the draws and creek zones with more hardwood species present. Species include black oak, bay laurel, blue oak, white oak, California buckeye, interior live oak, grey pine, valley oak, and Pacific madrone.

9B:

Unit 9B is 273 acres bordered by Caldwell Pines Rd in the south, Coldwater Creek Rd in the west, and an unnamed fire road to the northeast. The aspect is southwest except for a small portion in the east which has a northeast aspect. There is no recent fire history and development is low. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

This unit has three dominant vegetation types: interior live oak scrub, conifer, and mixed hardwood. Overall, the unit has a high fire hazard due to crown to crown contact and a heavy buildup of ground and ladder fuels across vegetation types. The northwest corner and along the fire road is interior live oak scrub. This area ranges from a dense 10-15 foot tall thicket of interior oak to chamise chaparral. Down and across the center of the unit is conifer. This section is primarily mature ponderosa pine with some knobcone pine, many large snags, and a thick understory. The eastern edge of the unit is mature mixed hardwood. Species include interior oak, leather oak, scrub oak, deer brush, knobcone pine, ponderosa pine, chamise, bay, coffee berry (*Frangula californica*), toyon, Pacific madrone, and various manzanita species.

10A:

Unit 10A is 937 acres bordered by Caldwell Pines Rd in the north, 7 Mile Rd in the west, Squaw Creek Rd in the east, and Mayacamas Creek in the south. The unit has a generally south aspect apart from a ridge in the southeast corner. The southeastern edge burned in 1952. Road and steam pipe density is moderate. All of the units' watercourses flow into Mayacamas creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

The vegetation type in this unit is mixed hardwood of varying age classes. Fuel hazard is a mosaic in this unit. At the northern end of 10A is mature hardwood woodland with no ladder fuels and minimal ground fuels, thereby creating a low fuel hazard. Continuing southward, the fuel hazard increases with shrubs and early successional hardwood combining with and acting as ladder fuels for mature hardwood overstory and grey pine, along with increasing densities of one hour and 10-hour fuels creating a moderate – high fire risk. The general age of the vegetation is a mix between early successional and mature.

10B:

Unit 10B is 393 acres bordered by Squaw Creek Rd and Lakeview Rd in the north, and Mayacamas Creek in the south. The unit has north, west, and south aspects. The entire unit burned in 1952. There is a moderate to high road density as shown on the map, but many pipes and large buildings can be found here. All of the units' watercourses flow into Mayacamas Creek. This unit will be treated with the ecological restoration treatment type, treatment specifics should be designed by an RPF.

Overall moderate to high fire hazard in this unit. Many ladder fuels here along with 1-10 hour ground fuels. There is a high degree of vertical continuity of fuels throughout this unit. The average ground fuel depth is lower overall, but surface fuels remain high, specifically within the draws. No standing dead canopy fuels are found here. Chaparral and shrubs are found in greater abundance at higher elevations contributing to a greater fuel hazard. The general age of this site is variable and diverse. Species within this unit include bay laurel, big leaf maple Douglas-fir, interior live oak, leather oak, pacific madrone, and grey pine

Roads Planning Unit (Fuel Break Treatments):

The Roads planning unit is approximately 3968 acres and is the area within 100 feet of either side of the roads in the project area. This unit will be treated with mechanical and hand treatment methods. Mechanical treatment will be restricted to mapped mechanical treatment areas and all areas where equipment can remain on the existing roadway. See attachment C maps. This area also represents the fuel break treatment types. These areas will have the most vegetation removed to create infrastructure to both manage prescribed fire and aid in firefighting activities. The fuels breaks will vary from complete to shaded fuel breaks and will be determined based on site conditions and overall project goals.

Phase 2:

The phase 2 planning unit is 15,042 acres and includes the sections of the project area that are not proposed for treatment at this time. Phase 2 areas have not had reconnaissance, botanical, archaeological, or any other surveys completed. These areas will require consultation by qualified professionals, and amendments to the plan prior to treatment implementation.

TREATMENT GOALS AND SPECIFICATIONS

The Geysers VTP is proposed by the project proponent to improve forest health, increase fire resilience, and reduce the risk of wildfire throughout the 27,284-acre treatment area. The following are general goals and specifications which will be further developed by the project RPF for each project area conducted under this VTP. The tree density specifications pertain mostly to the ecological restoration treatment types. Fuels breaks will generally remove more understory vegetation and retain less TPA. The long-term objectives for these forests are:

- Increase tree spacing
- Reduce fuel loading and insect/disease infestation
- Improve wildlife habitat and continuity
- Improve tree health
- Increase forest fire and drought resilience
- Reduce and control invasive non-native species
- Create a heterogeneous forest structure
- Increase species diversity

General Treatment Specifications for all forest types:

- Select trees for retention that are free from insect and disease infestation and show little to no signs of tree bole instability.
- Damaged trees showing signs of reduced vigor, insect/disease infestation, and/or poor crown health shall be targeted for removal.
- Retention trees may be pruned to a height of 6-12 feet, but the live crown should not be reduced below 50%.
- Limit “high stumps”. Cut trees to 6” above the ground.
- When dispersing chips throughout the treatment area, prevent the piling of chips greater than 8” above the ground where feasible.
- Do not allow chips to accumulate at the base of retained trees; make sure there is separation between the tree bole and the chips.
- Constructed burn piles should be less than or equal to 20’ diameter and should not be placed close enough to damage retained trees. The acceptable distance of a pile to a tree will depend on: The piles’ overall size, the topography, the weather at time of ignition, the retained tree’s structural integrity, and the fuel moisture at the time of ignition.
- Treat existing dead and down throughout all treatment types, but retain LWD > 16” diameter where feasible. The treatment will be aimed at breaking up the horizontal and vertical continuity of fuel. This may entail, chipping, masticating, piling and burning, lop and scattering, broadcast burning or any other feasible method.
- Trees determined by an RPF or Arborist to die within 5 years, may be removed regardless of DBH, species, or age.
- Snags should be retained where feasible within ecological restoration treatment types. Removal of snags will occur within shaded fuel breaks and where posing a risk to public safety or fuel break infrastructure. Snags shall be inspected by an RPF or Qualified Biologist, for the presence of sensitive species prior to removal. If a sensitive species is discovered, CDFW will be consulted prior to snag removal.

Treatment Specifications – Chaparral ecosystems:

- Ecological restoration treatments will not be implemented in Chaparral that is within their natural fire return interval.
- Target fire return interval for chaparral ecosystems will be determined based on the results of SPR BIO-5.
- For ecological restoration treatments, a minimum of 35 percent relative cover of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density (i.e., if baseline shrub canopy density is 60 percent, post treatment shrub canopy density will be no less than 40 percent).

Watershed Discussion

There are 8 watersheds within the treatment area. These watersheds are High Valley Creek, Upper Kelsey Creek, Mayacamas Creek, Fraiser Creek, Middle Big Sulphur Creek, Upper Big Sulphur Creek, Anderson creek, and Upper Little Sulphur creek. The two receiving rivers for these watersheds are the Sacramento River and the Russian River.

Watercourses from the Upper Kelsey Creek and High Valley Creek watersheds are received by Kelsey Creek which leads into Clear Lake, out Cache Creek to the Sacramento River down into the San Francisco Bay. The Anderson Creek watershed contains Putah creek which receives all the other watercourses in the watershed and flows into Lake Berryessa, from here Putah Creek flows into Prospect Slough down to the Sacramento River and eventually the San Francisco Bay. The Mayacamas Creek, Frasier Creek, Upper Big Sulphur Creek, Middle Big Sulphur Creek, and Upper Little Sulphur Creek watersheds all lead to Big Sulphur Creek which is received by the Russian River which then flows into the Pacific Ocean.

Upper Kelsey Creek is a 8,772-acre watershed with 2,662 acres in the project area. The watercourse is Kelsey Creek which begins in this watershed before it flows out into the High Valley Creek watershed. High Valley creek is a 10,215-acre watershed with 1,627 acres in the project area. In this watershed High Valley Creek flows into Kelsey Creek. Kelsey Creek then flows outside the watershed into Clear Lake and eventually Cache Creek and the Sacramento River. The Anderson Creek watershed is 12,154 acres with 5,950 acres in the project area. This watershed holds Anderson creek, Bear Canyon Creek, and Gunning Creek which flow into Putah Creek. Putah Creek then flows into Lake Berryessa and eventually the Sacramento River.

Mayacamas Creek is a 9,110-acre watershed with 6,101 acres in the project area. Mayacamas Creek flows through this watershed until it reaches Big Sulphur Creek. Fraiser Creek is a 4,951-acre watershed with 242 acres in the project area. Frasier creek flows into Big Sulphur Creek as it flows out of the project area. The Upper Big Sulphur Creek watershed is 7,473 acres with 5,852 acres in the project area. Middle Big Sulphur Creek is a 5,810-acre watershed with 4,167 acres in the project area. Big Sulphur Creek begins in the Upper Big Sulphur Creek watershed and runs through the Middle Big Sulphur Creek then Frasier Creek watersheds and out of the project area to the Russian River. Upper Little Sulphur Creek is a 7,034-acre watershed with 633 acres in the project area. Little Sulphur Creek begins in this watershed and flows into Big Sulphur Creek outside of the project area.

The Mayacamas Creek, Frasier Creek, Middle Big Sulphur Creek, Upper Big Sulphur Creek, and Upper Little Sulphur Creek watersheds are all parts of the Russian River Hydrologic Unit, Middle Russian River Hydrologic Area, Big Sulphur Creek Hydrologic Sub-Area. This sub area is 303(d) listed for Sedimentation/Siltation and Temperature. A 303(d) listing means the watercourse does not meet water quality standards. Hydrologic units are areas which drain towards a certain watercourse. The Russian River HU, Middle Russian River HA, Big Sulphur Creek HSA is the sub-area which drains into Big Sulphur Creek. This hydrologic sub area is a portion of the larger Russian River hydrologic unit.

The long-term effect of this project on watercourse and watershed health will be positive. Although treatment has the potential to create detrimental conditions to water quality over the short term, the included SPRs will prevent significant impacts described in this PSA. The project will reduce vegetation loading in a planned and controlled way, reducing the risk of severe effects from an unplanned wildfire. High severity wildfire causes long term changes to the vegetation and ecosystem, often burning not only the vegetation but organic material in the soil. This removal of vegetation causes reduction in rainfall interception which leads to increased peak flow in the watercourse. Increases in peak flow can contribute to increased streambank and channel erosion. Damage to the soil leads to decreases in infiltration and increased sedimentation. Significant reductions in riparian vegetation leads to increased average water temperatures. High severity wildfire causes water chemistry changes which are harmful to aquatic life. These changes include reduced dissolved oxygen and increased nitrogen, phosphorus, calcium, potassium, and magnesium. Vegetation treatments, like those proposed in this VTP, reduce the risk of high severity wildfire and their harmful effects to watercourses.

TREATMENT TYPES

The following treatment types are proposed: Fuel breaks and ecological restoration (see Operations Maps in attachment C). The treatment activities may include mechanical, manual, herbicide application, prescribed burning (Broadcast and Pile), and prescribed herbivory.

Fuel Breaks:

Shaded Fuel Breaks may be created 100 feet on both sides of trails, roads, structures, and ridgelines and are planned within the Roads Planning Unit. These treatments will provide staging areas to support firefighting and will provide control lines during prescribed fire activity. Most of the understory vegetation will be removed, while retaining a high degree of canopy cover to slow understory regeneration. Up to 75% of existing ground fuels, shrubs, and trees < 6" DBH will be chipped, or burned, except where precluded by the SPRs (i.e. within WLPZ or special treatment zone buffers). If the fuel break is comprised of a young stand predominantly under 12" DBH, trees will be retained as prescribed by an RPF. Once cut, all vegetation will be chipped, burned (Broadcast and Pile), or lopped and scattered. Vegetation that is lopped and scattered shall not be allowed to accumulate greater than 18" above the ground and will be avoided within 300 ft of a structure.

Herbicides may be used within these areas where necessary to prevent invasive and resprouting species. This will ensure the fuel break is maintained. Herbicide use is not permitted within the STZs for sensitive plant species. See attachment C maps and the attached botany report. *Any herbicide use shall comply with SPR HAZ-5, HAZ-6, HAZ-7, HAZ-8, and HAZ-9 as shown in attachment A*. Within fuel breaks, snags may be removed if assessed by an RPF or Qualified Biologist prior to removal. If determined to contain a sensitive species, CDFW will be consulted prior to snag removal in accordance with the applicable mitigation measures listed in attachment A.

Ecological Restoration:

Ecological restoration treatments are designed to restore an ecosystem to a historical state. These conditions vary depending on the degree and extent of disturbance the ecosystem is adapted to. Due to the exclusion of fire from California's fire-adapted forests over the last 2 centuries, the project area has become overgrown with small trees competing for resources. This has caused unhealthy conditions to persist along with the buildup of surface, ladder, and aerial fuel loading. Restoration activities will focus on reducing densities of trees, shrubs, and invasive species. The treatments will mimic fire by removing non-fire resilient species and ladder fuels. By removing vegetation in this way, forest openings will be allowed to re-establish in areas that have become overstocked.

Prescribed herbivory, manual, mechanical, and prescribed burning treatments will be utilized throughout the project area. Treatments in these areas will be focused on removing enough ground and ladder fuels to allow broadcast burning without threatening the larger trees and overall canopy health. The main goal being to return the stands to a historical stocking level, allowing burning or other treatment methods to occur as a maintenance practice. Treatments will vary by forest type and RPF prescription. Snags and LWD will be retained within this treatment area, unless they pose a threat to public safety.

TREATMENT ACTIVITIES

- *For all treatment activities: The project proponent is responsible for prescribing and implementing these treatment activities including the mitigations and monitoring described in this PSA and attachment A. Containment of any fire used for vegetation treatment is the responsibility of the project proponent.*

Mechanical Treatments

The treatment area is generally very steep, resulting in the majority of areas being inaccessible by heavy equipment. Approximately 915 acres are proposed to be treated with ground based heavy equipment. See attachment C maps. During field reconnaissance, the RPF determined which areas would be best suited for mechanical treatment based on environmental conditions. Slope, unstable areas, sensitive species habitat, WLPZs, and vegetation density were among the factors considered during the assessment. Mechanical treatments will occur within these mapped areas as well as along existing roads; vegetation may be mechanically treated, outside of mapped areas, if it can be reached with the machine's arm, while the tracks or wheels are within the road surface.

During mechanical treatments 1-2 pieces of heavy equipment (both tracked and rubber tired) shall be used to cut, uproot, crush/compact, or chop trees and brush. Mostly this may entail utilizing a mastication head to roughly chip target vegetation and disperse onsite, although, tilling, roller chopping, chaining, and skidding may occur as well. The types of equipment used to complete these treatments will include excavators, skid steers, feller bunchers, tracked chippers, etc… Mechanical treatments remain the most effective way to achieve the project goals and will thus be utilized where feasible.

Manual Treatments

Manual treatments may be employed everywhere within the approximately 27,285-acre treatment area. These treatments may involve between 3-10 laborers utilizing chainsaws, pole saws, tracked, and tow behind chippers. Cut material will be either lopped and scattered, chipped, or piled and burned in accordance with the treatment specifications above. Lop and scatter shall not occur within 150 ft of any building.

Prescribed Burning Treatments

Prescribed broadcast and pile burning may occur anywhere within the 27,285-acre treatment area, except were precluded by the SPRs, specifically unstable areas, WLPZs, and other STZs.

Broadcast burning may be used throughout the treatment area to reduce the surface and ladder fuel continuity. The intensity of this treatment will vary depending on many factors. Slope, weather, and fuel characteristics will dictate the outcome of the burn and will be utilized to determine the burn window. No broadcast burning shall occur until a burn plan is developed (see attachment A; SPR AQ-2 and SPR AQ-3). The Project Proponent is responsible for designing and implementing any prescribed burning activities.

A loader, excavator, dozer, or skidder may be utilized to establish fire lines where hand lines are not sufficient and where mechanical treatment activities are permitted. The burn plan must outline the equipment utilized in further detail.

Herbicide Treatments

Herbicides may be applied throughout the entirety of the proposed project, except within the unstable area STZ's or biological STZs. See attachment C, maps. Application of an herbicide, immediately following initial treatments will reduce the extreme regrowth of the understory (particularly within the fuel break treatments). Without chemical control, brush and other understory species will regrow rapidly and pose a secondary threat to fuel break and WUI infrastructure.
All herbicide use shall comply with SPR HAZ-5 , HAZ-6, HAZ-7, HAZ-8, and HAZ-9 as shown in attachment A.

Prescribed Herbivory

Targeted grazing of brush and understory may occur throughout the entirety of the proposed project, except within the unstable areas or STZs. See attachment C, maps. All tree and shrub grazing shall follow the limitations defined in attachment A SPRs. This treatment activity may entail the use of goats/sheep/cattle.

CalVTP PROJECT INFORMATION

1. **Project Title:** Geysers VTP
2. **Project Proponent Name and Address:**

   Northern Sonoma County Fire Protection District

   20975 Geyserville Ave

   Geyserville, CA 95441
3. **Contact Person Information and Phone Number:** Marshall Turbeville, (707) 857-4373
4. **Project Location:** Roughly 12 air miles East of the city of Cloverdale, in Sonoma, Mendocino, and Lake Counties, CA.

   The project is proposed on private parcels in Sonoma, Mendocino, and Lake Counties, which are within the following Public Land Survey description. Section 6 T10N R7W, Sections 1, 4, & 5 T10N R8W, Sections 29, 30, 31, 32, & 33 T11N R7W, Sections 3, 4, 5, 6, 7, 8, 9, 10, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, & 36 T11N R8W, Sections 1, 2, 3, 4, 5, 9, 10, 11, 12, 13, 14, 15, 23, 24, & 25 T11N R9W, Sections 18, 19, 30, 31, 32, 33 T12N R8W, Sections 24, 25, 26, 27, 28, 33, 34, 35, & 36 T12N R9W, MDBM within Kelseyville, Asti, The Geysers, Whispering Pines USGS 7.5 Minute Quadrangles. It spans from Hwy 175 in the East to Geysers Road in the West.

5. **Total Area to be Treated (acres)** 27,285 Acres.
6. **Description of Project**:
   a. **Initial Treatment**

      - *See Vegetation Treatment Plan.*

   Treatment Types

   ☐ Wildland-Urban Interface Fuel Reduction

   ☒ Fuel Break

   ☒ Ecological Restoration

   Treatment Activities

   ☒ Prescribed Burning (Broadcast), **27,285** acres

   ☒ Prescribed Burning (Pile Burning) **27,285** acres

   ☒ Mechanical Treatment, **915** acres

   ☒ Manual Treatment, **27,285** acres

   ☒ Prescribed Herbivory, **27,285** acres

   ☒ Herbicide Application, **27,285** acres

   Note: Multiple treatment activities may be applied in the same area

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

☒ Grass Fuel Type

☒ Shrub Fuel Type

☒ Tree Fuel Type

b. Treatment Maintenance

- *Estimated treatment maintenance is based on each initial treatment completed. It is not anticipated that the initial treatment shall be completed on the entire project within 5 years of project approval.*
- *Treatment maintenance timing and scope will vary depending on the level of understory regrowth in response to initial treatments, which is highly dependent on-site quality, water availability, soils, aspect, initial treatment intensity, use of herbicides, etc…*

Fuel Break Maintenance:

Treatments within the Fuel Break areas may reoccur every 1-10 years depending on the effectiveness of the initial treatments and the level of vegetation regeneration. It is anticipated that understory vegetation will regrow quickly within the fuel breaks due to the greater disturbance associated with these types of treatments. A high canopy closure along with herbicide use will slow understory re-initiation. If herbicides aren't utilized, it is highly likely the fuel breaks will require retreatment after roughly 3 years. Alternatively, if herbicides are applied to target vegetation within the fuel break (i.e. vigorously resprouting and/or invasive species) maintenance treatments may not be necessary for 10 years.

Ecological Restoration Maintenance:

The goal within these treatment types within the historically forested areas is to maintain a high overall canopy closure, resulting in slow regeneration of the understory. It is estimated that treatment maintenance within these areas shall occur every 5-15 years, focusing mainly on treating dead and down. Again, the maintenance period will depend on the vegetation response to treatment. Canopy closure around grassy openings that were historically meadow areas may be greatly reduced. This will serve as meadow restoration and grassland conservation.

- *For maintenance of all treatment types: An assessment will be made by the project proponent which will determine when maintenance treatments shall occur. This will be based on regenerated vegetation and fuel loading assessments.*

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

☐ Wildland-Urban Interface Fuel Reduction

☒ Fuel Break

☒ Ecological Restoration

Treatment Activities [*see description in CalVTP PEIR Section 2.5.2, check every applicable category; include number of acres subject to each treatment activity, provide detail in description of Treatment Maintenance*]

☒ Prescribed Burning (Broadcast), **27,285** acres

☒ Prescribed Burning (Pile Burning) **27,285** acres

☒ Mechanical Treatment, **915** acres

☒ Manual Treatment, **27,285** acres

☒ Prescribed Herbivory, **27,285** acres

☒ Herbicide Application, **27,285** acres

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

☒ Grass Fuel Type

☒ Shrub Fuel Type

☒ Tree Fuel Type

Use of the PSA for Treatment Maintenance

Prior to implementing a maintenance treatment, the project proponent will verify that the expected site conditions as described in the PSA are present in the treatment area. As time passes, the continued relevance of the PSA will be considered by the project proponent in light of potentially changed conditions or circumstances. Where the project proponent determines the PSA is no longer sufficiently relevant, the project proponent will determine whether a new PSA or other environmental analysis is warranted.

In addition to verifying that the PSA continues to provide relevant CEQA coverage for treatment maintenance, the project proponent will update the PSA at the time a maintenance treatment is needed when more than 10 years have passed since the approval of the PSA or the latest PSA update. For example, the project proponent may conduct a reconnaissance survey to verify conditions are substantially similar to those anticipated in the PSA. Updated information will be documented.

7. **Regional Setting and Surrounding Land Uses:** The project area is within Lake, Mendocino, and Sonoma counties. The property is a conglomerate of individually owned private parcels and public land. The land uses within and adjacent to this property are grazing, hunting, power generation and agriculture.

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

    - Smoke management plan will be prepared for the Northern Sonoma County APCD, Mendocino County AQMD, and Lake County AQMD.
    - A burn permit will be obtained from CALFIRE when required.
    - A lake or streambed alteration (LSA) agreement with CDFW may be required if working within the channel zone of a watercourse and manipulation to the stream bed and bank is anticipated.

    Coastal Act Compliance

    ☒ The proposed project is NOT within the Coastal Zone

    ☐ The proposed project is within the Coastal Zone (*check one of the following boxes*)

    ☐ A coastal development permit been applied for or obtained from the local Coastal Commission district office or local government with a certified Local Coastal Plan, as applicable

    ☐ The local Coastal Commission district office or local government with a certified Local Coastal Plan (in consultation with the local Coastal Commission district office) has determined that a coastal development permit is not required

9. **Native American Consultation**. *For treatment projects that are within the scope of the CalVTP PEIR, AB 52 consultation for AB 52 compliance has been completed. The Board of Forestry and Fire Protection conducted consultation pursuant to Public Resources Code section 21080.3.1 during preparation of the PEIR.*
Pursuant to CalVTP SPR CUL-2, the geographically affiliated Native American tribes have been contacted by the contracted archaeologist.

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 treatments in proposed project areas outside the CalVTP treatable landscape do not result in substantial changes in the project, no substantial changes in circumstances have occurred, and no new information of substantial importance has been identified. The inclusion of project areas outside the CalVTP treatable landscape will not result in any new or substantially more severe significant impacts. None of the conditions described in State CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR have occurred; therefore, this **ADDENDUM** is adopted to address the project areas outside geographic extent presented in the PEIR.

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

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

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

Signature	Date: 12/12/24
Printed Name: Scott Heerman	Title: President
Agency: Northern Sonoma County Fire Protection District	

PROJECT SPECIFIC ANALYSIS

PD-3.2: 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	No	None	NA	None	NA	NA
Impact AES-2: Result in Long-Term, Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from WUI Fuel Reduction, Ecological Restoration, or Shaded Fuel Break Treatment Types	LTS	Impact AES-2, pp. 3.2-20 – 3.2-25	No	None	NA	None	NA	NA
Impact AES-3: Result in Long-Term Substantial Degradation of a Scenic Vista or Visual Character or Quality of Public Views, or Damage to Scenic Resources in a State Scenic Highway from the Non-Shaded Fuel Break Treatment Type	PS	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. None: there are SPRs and/or MMs identified in the PEIR for this impact, but none are applicable to the treatment project.

LTS: Less than Significant; SU: Significant and unavoidable. PS: Potentially Significant

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

	Potentially Significant	**Less Than Significant with Mitigation Incorporated**	**Less than Significant**
	☐	☐	☐

Discussion

Impact AES-1
The project area is not within view of a public scenic vista or scenic highway.

Impact AES-2
The project area is not within view of a public scenic vista or scenic highway.

Impact AES-3
The project area is not within view of a public scenic vista or scenic highway.

CalVTP Addendum for Change to Geographic Extent
The project proponent has 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, the viewshed and treatment impacts are consistent with those examined in the PEIR and would therefore not create any new significant impacts.

PD-3.3: AGRICULTURE AND FORESTRY RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact AG-1: Directly Result in the Loss of Forest Land or Conversion of Forest Land to a Non-Forest Use or Involve Other Changes in the Existing Environment Which, Due to Their Location or Nature, Could Result in Conversion of Forest Land to Non-Forest Use	LTS	Impact AG-1, pp. 3.3-7 – 3.3-8	Yes	NA	NA	LTS	No	Yes

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

LTS: Less than Significant; SU: Significant and unavoidable. PS: Potentially Significant

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

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

Discussion

Impact AG-1

Initial and maintenance treatments will encourage a healthier forest condition by removing competing vegetation and in some cases scarifying the ground, allowing for desirable tree species to seed in. The project area exists within various forest types such as hardwood forest, chaparral, oak woodland, and conifer forest. The project will focus on removing trees less than 10" DBH, and brush species, which will not have a significant negative effect on the forest structure. Not all trees in this size class will be removed, thus preventing a future conversion, due to lack of regeneration in the understory.

The treatments proposed are intended to protect forests from a stand replacing wildfire, which would have the potential to convert the forest land into a brush dominated pioneer species structure. This would have the potential to initiate a cycle of high intensity wildfires which could create an adaptation towards chapparal species.

This Vegetation Treatment Plan does not prescribe treatment specifications for each forested area, but rather gives a brief overview of current conditions and general goals. The project proponent shall consult with an RPF for the development of the treatment prescriptions for each forest type. Treatment prescriptions and other "forestry services" for all "forested landscapes" must be developed by an RPF as required by Professional Foresters Law; Public Resources Code Sections 750 – 758. Forested landscapes are defined as,

> *"… those tree dominated landscapes and their associated vegetation types on which there is growing a significant stand of tree species, or which are naturally capable of growing a significant stand of native trees in perpetuity, and is not otherwise devoted to non-forestry commercial, urban, or farming uses."*

"Forestry" is defined as,

> *"…the science and practice of managing forested landscapes and includes, among other things, the application of scientific knowledge and forestry principles in the fields of fuels management and forest protection, timber growing, and utilization, forest inventories, forest economics, forest valuation and finance, and the evaluation of mitigation of impacts from forestry activities on watershed and scenic values…"*

After assessing the proposed treatments and their effect on the potential for converting forest land within the project area, the project proponent has determined that the treatments will in fact protect forest resources from conversion, since treatments will be developed by an RPF.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside the CalVTP treatable landscape constitutes a change to the geographic extent presented in the PEIR. However, the composition of forestland as defined in public resources code section 12220(g) is essentially the same within and outside the treatable landscapes of this specific project area. The reason for their dis-inclusion is most likely due to low resolution mapping performed on a large scale. This mapping approach failed to include all forestland needing treatment. This includes low density oak woodland and transition zones which still fall within the definition of a forestland according to the California Forest Practice Rules definition listed above. Therefore, there is no change in the impact to forest resources within these areas.

PD-3.4: 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-4, AQ-1-AQ-4, AQ-6	AQ-1 See exclusions in discussion	PSU	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	HAZ-1	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	Yes	AQ-5, AQ-4,	NA	LTS	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-2, AQ-3, AQ-6	NA (No feasible mitigation available	PSU	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	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-2, AQ-3, AQ-6	NA (No feasible mitigation available	PSU	No	Yes

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

LTS: Less than Significant; PSU: Potentially Significant and unavoidable. PS: Potentially Significant

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

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

Discussion

Impact AQ-1
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 applicable SPRs will be implemented during treatments. AQ-5 would not apply to this project because there are no known asbestos areas within the treatment units.

The overall impact was determined to be Potentially significant and un-avoidable by the PEIR. Mitigation measure AQ-1 will be applied where feasible and will, along with the SPRs, reduce the impact. The following mitigation measures listed under AQ-1 will not be applied due to lack in technology and infeasibility at the local level:

- Electric and gasoline-powered equipment will be substituted for diesel-powered equipment.
    - *Currently there are no alternatives available which offer the functional ability to handle the workload required for the treatment activities. Diesel engines are the most efficient and widely available option for completing fuels treatments, particularly with regards to mechanical treatment activities. Furthermore, gasoline engines lack the torque required to complete treatments on steep slopes under extreme loads. This is where diesel engines have an advantage, allowing treatment on areas which would otherwise be untreatable. Diesel powered equipment also has a greater workload ability, allowing work to be completed faster. This has both an economic impact to the project as well as a reduced duration of air quality offense.*

      Lithium-ion batteries lack the range and charging speed to allow "theoretical" electric powered heavy equipment to complete the job within any sort of real-world efficiency. Because the jobs are so far from any charging station, it would be necessary to have a mobile charging source. That charging source would likely require a gas-powered generator to work, thus defeating the purpose of the mitigation measure.

      Ultimately, the technology is lacking, both locally and elsewhere, to include this portion of the mitigation measure.

Impact AQ-2
Use of mechanical equipment during initial and maintenance treatments could expose people to diesel particulate matter emissions. This potential was examined within the PEIR. These types of emissions for the treatment activities are within the scope of the PEIR because they are the same, including types of equipment and potential duration of treatment. With SPRs listed in the table above, this impact is less than significant.

Impact AQ-3
Parts of the treatment area have naturally occurring serpentine rock which poses an asbestos hazard if crushed. Crushing rocks in this area could expose people to asbestos. This impact was examined in the PEIR and found to be less than significant with the inclusion of SPRs AQ-4 and AQ-5. No mechanical treatments will occur within serpentine areas, see attached maps. If any new serpentine areas are identified during treatment they will be documented and avoided.

Impact AQ-4
Prescribed burning during initial and maintenance treatments could expose people to toxic air contaminants, which was examined in the PEIR. The duration and parameters of prescribed burns are the same as addressed in the PEIR, therefore the potential exposures are within the scope of the PEIR. All feasible SPRs for controlling smoke emissions are included in this PSA as well as the PEIR and no further mitigations are feasible. The impacts remain significant and unavoidable as identified in the PEIR. Nevertheless, these impacts are significantly less than those created during large scale wildfires. The goal of these burns being to prevent devastating large-scale wildfires, and thus large-scale impacts to air quality.

Impact AQ-5
The use of diesel equipment during operations could expose people to objectionable odors. This potential was examined in the PEIR. The potential impact from this project is within the scope because the duration, equipment used, and treatment activities are consistent with those analyzed in the PEIR. The treatment area is not located near any sensitive receptors which would make this potential impact significant.

Impact AQ-6
Prescribed burning during initial and maintenance treatments could expose people to objectionable odors. This potential was examined in the PEIR. The potential impact from this project is within the scope because the duration, equipment used, and treatment activities are consistent with those analyzed in the PEIR.

CalVTP Addendum: Change to Geographic Extent
The inclusion of land that is outside of the treatable landscape presented in the PEIR, constitutes a change in the geographic extent presented in the PEIR. The air quality conditions as well as the exposure potential present in these areas are the same as those within the treatable landscape. Consequently, the impact will be the same and is within the scope of this PEIR for all of the above listed impacts.

PD-3.5: 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 through 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 through CUL-6, and CUL-8	NA	LTS	No	Yes
Impact CUL-4: Disturb Human Remains	LTS	Impact CUL-4, p. 3.5-18	Yes	NA	NA	LTS	No	Yes

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

LTS: Less than Significant; LTSM: Less than significant with mitigation; PSU: Potentially Significant and unavoidable; PS: Potentially Significant

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

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

Discussion

Impact CUL-1
The proposed treatments have the potential to damage historical resources and this has been assessed in the PEIR. The impact of this project is within the scope of the PEIR because the treatment activities are the same and the impact was determined to be less than significant with the inclusion of the above listed SPRs.

Impact CUL-2
Vegetation treatments include mechanical treatments that could disturb the ground, potentially resulting in damage to unknown archaeological resources. A survey and NWIC records search has been conducted by a qualified archaeologist prior to treatment activities occurring. The impact of this project was determined to be the same as the PEIR because the treatment activities are the same and the potential resources are the same. As per Mitigation Measure CUL-2, any archaeological resource

discovered during treatments will be given 100 ft avoidance, and the site will be reviewed by an archaeologist.

Impact CUL-3
This impact was assessed in the PEIR and with the inclusion of the SPRs listed, the impact will be less than significant. SPRs CUL-1 through CUL-6 and CUL-8 will be implemented to mitigate potential impact. All information received regarding pre-historical resources and Native American cultural resources will remain confidential.

Impact CUL-4
There is a potential for treatment activities to uncover human remains due to the nature of the treatment activities. The potential for treatment activities to uncover human remains was examined in the PEIR. This impact is within the scope of the PEIR because the intensity of ground disturbance, the equipment used, and the duration of their use is the same as those analyzed in the PEIR.

CalVTP Addendum: Change to Geographic Extent
The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent of the PEIR. However, the potential archaeological resources and the environmental conditions are consistent throughout the treatment area, both inside of the treatable landscapes and outside due to the close proximity of these two areas. The boundaries of the treatable landscapes have no bearing on the movement or lives of historical or prehistorical societies. Furthermore, the area outside of the treatable landscape will be included in the archaeological records search, survey, and Native American notification, as well as all other applicable SPRs. There is not expected to be a significant change to the potential impacts or resources to invalidate the PEIR. As a result, the land outside of the treatable landscapes is also within the scope of the PEIR.

PD-3.6: BIOLOGICAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact BIO-1: Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications	PS	Impact BIO-1, pp 3.6-131–3.6.138	Yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-7, BIO-9, GEO-1, GEO-2 GEO-3, GEO-4, GEO-5, GEO-7, HYD-4, HYD-5	BIO-1a; BIO-1b; BIO-1c	LTSM	No	Yes
Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications	LTS (all wildlife species except bumble bees) S&U (bumble bees)	Impact BIO-2, pp 3.6-138–3.6-184	Yes	BIO-1, BIO-2, BIO-9, BIO-10, BIO-11 GEO-1, HYD-4, GEO-2, GEO-3	BIO-2a, BIO-2g,	LTSM	No	Yes
Impact BIO-3: Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation that Leads to Loss of Habitat Function	LTS	Impact BIO-3, pp 3.6-186–3.6-191	Yes	BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, BIO-6, BIO-9, HYD-4	NA	LTS	No	Yes
Impact BIO-4: Substantially Affect State or Federally Protected Wetlands	LTS	Impact BIO-4, pp 3.6-191–3.6-192	No	BIO-1, BIO-2, HYD-4	None	LTS	No	Yes
Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries	LTS	Impact BIO-5, pp 3.6-192–3.6-196	Yes	BIO-1, BIO-2, BIO-11 HYD-4	None	LTS	No	Yes
Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife	LTS	Impact BIO-6, pp 3.6-197–3.6-198	No	None	NA	NA	NA	Yes
Impact BIO-7: Conflict with Local Policies or Ordinances	No Impact	Impact BIO-7, pp 3.6-	No	None	NA	NA	NA	NA

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:								
Protecting Biological Resources		198–3.6-199						
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	None	NA	NA	NA	NA

[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.

LTS: Less than Significant; LTSM: Less than significant with mitigation; PSU: Potentially Significant and unavoidable; PS: Potentially Significant

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

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

Discussion

Pursuant to SPR BIO-1, Frontier Resource Management LLC conducted a data review of project-specific biological resources and a reconnaissance-level survey of the treatment areas. The main goal of these surveys being to determine the habitat suitability of the project area for the special status species identified during the data review.

Attachment B includes a comprehensive list of all special status species with the potential to occur within the project area based on the SPR BIO-1 requirement for a data review of biological resources. It includes the results of a 9-quad search of the California Natural Diversity Database (CNDDB) and the California Native Plant Society Inventory of Rare and Endangered Plants of California. Appendix Bio-3 (Table 13a, Table 13b, and Table 19) of the PEIR (Volume II), which is a list of special-status plants and wildlife and their habitats, was also reviewed for special-status plants and wildlife that could occur within the treatment areas. Species determined to have a high potential for occurrence, based on project specific habitat, were included in the list of potential species.

Reconnaissance-level surveys were conducted between March 2024 and September 2024, to identify and document sensitive resources within the treatment areas. This included aquatic habitat, riparian habitat, and potentially sensitive natural communities. During these surveys, habitat suitability determinations were made for the potential special-status plant and wildlife species listed in attachment B. Below are the final lists of special-status plant and wildlife species with a moderate to high potential of occurring within the treatment area. Some species included in attachment B were ruled out due to lack of habitat or lack of threat from project activities.

Impact BIO-1

Initial and maintenance treatments could result in direct or indirect adverse effects to the special status plant species with potential to occur within the treatment areas. See the botany report within Attachment B for the full analysis. Of those species, those listed below have been located during SPR BIO-7 botany surveys. If additional species are located, they will be recorded and protected as specified in the botany report.

A majority of the project area will be treated under the ecological restoration treatment type. As stated in the PEIR, Biological Resources section 3.6 Pg 133,

> *"In the ecological restoration treatment type, the objective is to restore degraded, damaged, or destroyed ecosystems and habitats in fire-adapted vegetation types by returning them to their natural fire regime and returning vegetation in Condition Classes 2 and 3 to Condition Class 1[1]. This would benefit special-status plants associated with these habitats in the long-term by restoring the historic vegetation composition, structure, and habitat values and function under which these species evolved. Removal of overgrown shrubs and thinning tree canopies could benefit special-status plant populations in the short term by allowing more light to reach them and by removing competition for water, light, and nutrients; however, removal of overstory vegetation could alter microhabitat conditions in a way that is detrimental to special-status plant species in the short term if they are adapted to growing in shade or if the loss of overstory vegetation results in adverse changes in soil moisture, or destabilizes soil resulting in erosion that limits sensitive plant establishment and growth or washes away sensitive plants or their seeds and propagules with eroding soil."*

The ecological restoration treatment type proposes to retain the large trees comprising the overstory - except were posing a risk to public safety or where threatening overall ecosystem health (as determined by the RPF), through the spread of insects or disease. As a result, it is anticipated that the removal of overstory vegetation within these treatment types will be minimal and will therefore not have a significant impact to potential sensitive plant species. On the other hand, the fuel break treatment type does have a greater potential to impact sensitive plant populations due to the scope of increased vegetation removal.

Low intensity broadcast burning will be used to treat vegetation to accomplish the ecological restoration goals, by returning a fire-adapted ecosystem to its historical disturbance regime. The following is from "Forest Ecology and Management" B.M. Collins et al, regarding a study around the effects of low intensity prescribed fire on understory vegetation:

> *"This increase in light combined with increased mineral soil exposed in both treatments involving fire, most likely caused by the consumption of litter and duff layers during burning, improved conditions for seed germination and vegetative resprouting on the forest floor. These improved conditions allowed for rapid recovery of understory plants, and most likely explain the lack of significant treatment effects on forb and graminoid cover for any of the three alternatives." …*
>
> *"In fire only units exotic species richness and cover did not change significantly compared to the control"…*
>
> *"The two species that showed the most substantial reduction following the prescribed fire treatments were Goodyera oblongifolia (rattlesnake orchid) and Pyrola picta (white-veined wintergreen). Both of these species are considered late-seral species, meaning they are associated with more closed canopy stands characteristic of later successional stages."*

Because so much of the project area for this VTP is currently overgrown with vegetation, a net increase in species richness over the long run is expected. This is due to the creation of more early successional forest types and reduction in understory density during treatment, which is likely to increase overall habitat diversity. The increase of exotic annual species, which may occur, is a concern. Exotics are known to thrive in freshly disturbed sites due to their increased advantage over other early successional native species. SPR BIO-9 will be utilized to reduce this potential negative impact. That coupled with planned herbicide use on populations of invasives during maintenance treatments should reduce this

impact to a level of insignificance. Mechanical treatments will occur along existing roads and within some proposed shaded fuel breaks. The mechanical treatment areas have the greatest potential to impact sensitive plant populations.

As a result of the above analysis, the RPF has determined that SPR BIO-7 botanical surveys are only applicable within the mechanical treatments and within a portion of the fuel breaks areas. All mechanical treatment areas have been surveyed along with fuel break areas that intersect serpentine soil types. The botany report will outline the methods in more detail and will be amended to attachment B once completed.

The treatment activities and their potential for adverse effects on special-status species is within the scope of the PEIR. With the included mitigation measures and SPRs, the impacts are anticipated to be reduced to a level of insignificance.

Special Status Plant Species known to occur within the project area at this time:

Note for all non-listed special status plant species listed below: As listed in Attachment A Mitigation measure BIO-1b, the RPF has the ability to treat within the STZ of the "non-listed" special status species if it is determined to be a benefit to the overall health of the population.

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

Rincon Ridge Ceanothus *(Ceanothus confusus)*

Status: 1B.1 ; Not an ESA or CESA listed species

Habitat requirements and description: This species is prevalent in Sonoma, Lake and Napa Counties. It can be found on volcanic slopes in chaparral and pine/oak woodland ecosystems. Growing between .2 and .5 m tall, its leaves are opposite with blades between 10 and 20 mm folded lengthwise with 3-9 teeth on the distal end. The inflorescence is blue – purple in a 1-2 cm umbel like arrangement.

Potential for Occurrence: This species exists in one population within the project area within planning unit 5. This population has 100+ individuals with an average size of 8 inches in diameter covering an approximately 1.6-acre patch just northeast of the intersection of Big Sulphur Creek Rd and Burned Mountain Rd.

Refer to the Unit 5 map for exact location.

Mitigations: These populations will be protected from damaging effects, through the establishment of a 50 ft STZ. The project proponent shall implement the following protection measures within the STZ:

- No heavy equipment shall be operated within this zone, except along existing roadways.
- All trees will be retained within the STZs, unless posing a hazard to public safety. If a tree is planned for removal within the STZ an RPF or botanist shall be consulted to prevent take of individuals. Other understory species of brush or vines may be removed.
- Burn piles shall not be constructed within this zone.
- Prior to broadcast burning, a control line will be established and maintained around this STZ with either a hand or wet line to prevent damage to this population.

An RPF or botanist shall meet with the operations crew or equipment operator prior to treatments to provide training on identification and mitigation measures for this species.

Cobb Mountain Lupine *(Lupinus sericatus)*

Status: 1B.2 ; Not an ESA or CESA listed species

Habitat requirements and description: This species is prevalent in Colusa, Lake, Sonoma and Napa Counties. It can be found on open wooded slopes in broadleaf upland forest, chaparral, and lower montane conifer forest ecosystems. It is a perennial growing 15 – 50 cm. Its leaves are silver to gray green with short appressed hairs, leaves are 30 – 50 mm with 4-7 spoon shaped leaflets and are clustered near the base. Inflorescence is 10 – 30 cm with 12 – 16 mm purple – violet flowers.

Potential for Occurrence: This species was identified in one location within the project area within the roads treatment unit adjacent to planning unit 6. This population is in the location of an existing CNDDB observation and is along both sides of Socrates Mine Rd growing underneath steam pipes. The existing CNDDB observation is <50 plants observed in 1990 on a bend in the road. The current population appears unchanged and is mapped in a 17-acre STZ. Refer to the botany reports for exact location.

Mitigations: These populations will be protected from damaging effects, through the establishment of a 50 ft STZ. The project proponent shall implement the following protection measures within the STZ:

- No heavy equipment shall be operated within this zone, except along existing roadways.
- All trees will be retained within the STZs, unless posing a hazard to public safety. If a tree is planned for removal within the STZ an RPF or botanist shall be consulted to prevent take of individuals. Other understory species of brush or vines may be removed.
- Burn piles shall not be constructed within this zone.
- Prior to broadcast burning, a control line will be established and maintained around this STZ with either a hand or wet line to prevent damage to this population.
- An RPF or botanist shall meet with the operations crew or equipment operator prior to treatments to provide training on identification and mitigation measures for this species.

Vine Hill Ceanothus *(Ceanothus foliosus var. vineatus)*

Status: 1B.1 ; Not an ESA or CESA listed species

Habitat requirements and description: This species is found in the South North coast ranges. It thrives on rocky slopes or flats in chaparral, woodland, or mixed evergreen forest ecosystems. Plant grows mat to mound like staying under .5 m. leaves are 1-3 mm with entire or few toothed margins. Inflorescence is a blue – purple often umbel like raceme.

Potential for Occurrence: This species was identified in one population within the project area within planning unit 5. This population has 300+ individuals with an average size of 2.5 feet in diameter and 1.5 feet tall, growing in a slightly larger area overlapping the rincon ridge ceanothus. Refer to the botany reports for exact locations.

Mitigations: These populations will be protected from damaging effects, through the establishment of a 50 ft STZ. The project proponent shall implement the following protection measures within the STZ:

- No heavy equipment shall be operated within this zone, except along existing roadways.
- All trees will be retained within the STZs, unless posing a hazard to public safety. If a tree is planned for removal within the STZ an RPF or botanist shall be consulted to prevent take of individuals. Other understory species of brush or vines may be removed.
- Burn piles shall not be constructed within this zone.
- An RPF or botanist shall meet with the operations crew or equipment operator prior to treatments to provide training on identification and mitigation measures for this species.
- Prior to broadcast burning, a control line will be established and maintained around this STZ with either a hand or wet line to prevent damage to this population.

Three fingered morning glory *(Calystegia collina ssp. tridactylosa)*

Status: 1B.2 ; Not an ESA or CESA listed species

Habitat requirements and description: This species is prevalent in Mendocino and Lake Counties. It thrives on open areas within pine or oak woodland ecosystems. Growing to between 15 – 30 cm tall, its leaves are approximately 3 cm long and distinctly lobed and tomentose. The flower is white with a 27 – 33mm corolla.

Potential for Occurrence: This species was identified in two populations within the project area, Population A is within the roads planning unit adjacent to the phase 2 planning unit. This population has 10 individuals with a 6-inch average diameter growing along a 200-foot stretch of Old Socrates Mine Rd. Population B is in the Phase 2 planning unit. This population is 13 individuals with a 3-inch average diameter growing in a 50 square foot section of disturbed soil adjacent to a dirt road off Old Socrates Mine Rd. Refer to the botany reports for exact locations.

Mitigations: These populations will be protected from damaging effects, through the establishment of a 50 ft STZ. The project proponent shall implement the following protection measures within the STZ:

- No heavy equipment shall be operated within this zone, except along existing roadways.
- All trees will be retained within the STZs, unless posing a hazard to public safety. If a tree is planned for removal within the STZ an RPF or botanist shall be consulted to prevent take of individuals. Other understory species of brush or vines may be removed.
- Burn piles shall not be constructed within this zone.
- Prior to broadcast burning, a control line will be established and maintained around this STZ with either a hand or wet line to prevent damage to this population.
- An RPF or botanist shall meet with the operations crew or equipment operator prior to treatments to provide training on identification and mitigation measures for this species.

Geysers panicum (*Panicum acuminatum var. thermale*)

Status: 1B.2 ; CESA Endangered

Habitat requirements and description: This species can be found in the inner north coast and high cascade ranges. It thrives in peaty meadows at hot springs and fumaroles. Growing to between 10 - 80 cm tall, its leaves have a soft hairy sheath and are 4 – 10 cm long and 5 – 12 mm wide. The flowering time is from June to September.

Potential for Occurrence: This species was identified in 10 populations within the project area in the 2023 Monitoring of Geysers Panicum Populations at The Geysers report. These 10 populations are divided into 6 named occurrences for monitoring. Refer to attachment C for exact locations.

- Occurrence 1, Historic Geysers resort Site, holds population 1 and is located west of the intersection of Geysers Resort Rd and Big Geysers Rd. This is in Unit 1B and the Roads planning units. Population 1 has 20,000 plants over an estimated 21 acres.
- Occurrence 2, Hot Springs Creek, holds populations 2 and 3, and is located just north of the intersection of Big Sulphur Creek Rd and Burned Mountain Rd. This occurrence is in Unit 5 and the Roads planning unit. Population 2 has 2,000 plants over approximately 7 acres and population 3 has 25 plants over approximately 2 acres.
- Occurrence 3, Little Geysers Area, holds populations 6 and 7, and is located between Big Sulphur Creek Rd and JD Kingcade Rd. This area is in Unit 5 and the roads planning unit. Population 6 has 1,085 plants over approximately 1.2 acres and population 7 has an estimated 100,000 plants over approximately 3.8 acres.
- Occurrence 4, USGS Bench Mark 2163, holds population 5 and is located along Big Sulphur Creek Rd. This is in the Phase 2 and roads planning units. Population 5 has approximately 4,000 plants over approximately 2.8 acres.
- Occurrence 7, Big Sulphur Creek Rd., contains population 4 and is located along Big Sulphur Creek Rd. This is in planning units 5, the roads, and phase 2. Population 4 has 526 plants over approximately 3 acres.

- Occurrence 10, Sulphur Bank Drive Area, holds populations 8, 9, and 10, and is located between Big Geysers Rd and Big Sulphur Creek. This occurrence is in Unit 1B. Population 8 has declined but does not have a population estimate for this year, mapped as 1 acre. Population 9 has 5,300 plants across approximately 2.5 acres. Population 10a has 4,500 plants and 10b has 450 plants, mapped over a combined 5.2 acres.

Mitigations: These populations will be protected from damaging effects, through the establishment of a 50 ft STZ. The STZ will be flagged by an RPF or RPF designee. The project proponent shall implement the following protection measures within the STZ:

- No heavy equipment shall be operated within this zone, except along existing roadways.
- All trees will be retained within the STZs, unless posing a hazard to public safety. If a tree is planned for removal within the STZ an RPF or botanist shall be consulted to prevent take of individuals. Other understory species of brush or vines may be removed.
- Burn piles shall not be constructed within this zone.
- An RPF or botanist shall meet with the operations crew or equipment operator prior to treatments to provide training on identification and mitigation measures for this species.
- Prior to broadcast burning, a control line will be established and maintained around this STZ with either a hand or wet line to prevent damage to this population.

Wildfires within and adjacent to Geysers panicum populations do not appear to have negatively affected the populations, potentially as a result of the fact that this perennial grass often has substantial living vegetation during the fire season (late summer-fall) and grows in areas that are not densely vegetated and therefore do not carry groundfires. Invasive plants are persistent at several populations (populations 2 and 7), and Bermuda grass appears to be expanding at populations 3 and 8.

Based on the above excerpt from the 2023 monitoring report, it is not anticipated that this species will be adversely impacted by fuel treatments. The protections in the STZ above will ensure the species is not harmed during treatment. Broadcast burning near these populations is not anticipated to harm this species, and mechanical treatments will be excluded.

Impact BIO-2
Treatment activities could result in direct or indirect adverse effects to special status wildlife species with suitable habitat within the treatment area. See attachment B for an analysis of all species with the potential to occur (CNDDB 9 quad search results were considered). Those species with moderate to high potential for occurrence, or which are known to occur within 1.3 miles of the project area, have been included in the list below. With the implementation of the SPR's and mitigation measures listed in the table above, this potential impact will be less than significant. The following species will be included in SPR BIO-2 training for workers. If one of these species is discovered during work activities, an RPF or qualified biologist will be notified and protection measures will be developed depending on the species, and time of year (i.e. nesting or critical breeding season).

Special-Status Wildlife Species with potential to Occur in the Treatment Area

Birds

Burrowing owl (*Athene cunicularia*)
Status: Candidate State Endangered
Habitat Requirements: Burrowing owls are yearlong residents of Sonoma, Mendocino, and Lake Counties. They occur in open, dry grassland and desert habitats, and in grassland, forb and open shrub stages of pinyon-juniper and ponderosa pine habitats. They use rodent or other burrows for roosting and nesting cover.
Potential for Occurrence: The potential for this species to occur within the project area is moderate. Suitable open dry grassland habitat is present within the project area. No individuals or nests were observed during reconnaissance. The closest known occurrence is over 6 miles Southwest of the project area.
Potential Project Impact: The potential for the proposed activities to impact this species is low. Areas with suitable habitat are not targeted for manual treatment due to lack of fuel. Prescribed burning will likely have a positive effect on habitat quality. The implementation of SPR BIO-2 will train crew members to identify and avoid this and other special status species.

Mammals

Fringed myotis (*Myotis thysanodes*)
Status: BFS
Habitat Requirements: Optimal habitats for the Fringed myotis are pinyon-juniper, valley and foothill grassland and hardwood-conifer habitats. They roost in caves, mines, buildings, and crevices. They forage around streams, lakes, and ponds.
Potential for Occurrence: There is a moderate potential for occurrence for this species. There is suitable habitat present within the project area in any caves, mines, buildings, or crevices. Several mines are mapped within the project area, no open mines were discovered during reconnaissance. No individuals were observed during reconnaissance and the closest known occurrence is over 2 miles northeast of the project area.
Potential Project Impact: There is a low potential for impact to this species. Areas where roosting is likely are not targeted for intensive treatment. Bridges, buildings, and other structures are not proposed for alteration. Broadcast burning treatments are not expected to impact this species due to the insulation against sounds and temperature provided by caves and mines. The implementation of SPR BIO-2 will train crew members to identify and avoid this and other special status species.

Pallid Bat (*Antrozous pallidus*)
Status: None
Habitat Requirements: Pallid bats occupy a wide variety of habitats, such as grasslands, shrublands, and forested areas of oak and pine, but prefer rocky outcrops with desert scrub (Zeiner et al. 1990b). The pallid bat roosts in caves, mines, crevices, buildings, under bridges, and occasionally in hollow trees. Day roosts are located at sites that provide protection from the heat of the day; Night roosts are in more open areas such as porches or open buildings (Zeiner et al. 1990b). They roost in small groups of 20 or more. They need water, but have a good urine-concentrating ability, so they don't have to roost within close vicinity of a water source (Geluso 1978). In California, pallid bats do not migrate, but make local movements to hibernacula and during post-breeding. Pallid bats feed on a wide variety of relatively large ground dwelling or slow flying insects and arachnids (Zeiner et al. 1990b). Colonies of

A. pallidus will typically emerge about 1 hour after sunset, return to roost, and then forage again before dawn. Specializes in foraging on insects on the ground, versus in the air, by listening for the insect footsteps. The pallid bat is found throughout most of the western U. S. and Mexico. In California, the bat is widespread in low elevations with the exception of the high Sierra Nevadas from Shasta to Kern counties and in the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County (Zeiner et al. 1990b).
Potential for Occurrence: There is a moderate potential for this species to occur. Habitat is present within the project area under any bridges, buildings, caves, and other suitable roosting structures. Several mines are mapped within the project area, no open mines were discovered during reconnaissance. The closest known occurrence is over two miles northeast of the project area.
Potential Project Impact: There is a low potential for impact to this species. Bridges, buildings, and other structures are not proposed for alteration; large trees and snags will also be retained. Broadcast burning treatments are not expected to impact this species due to the insulation against sounds and temperature provided by caves and mines. The implementation of SPR BIO-2 will train crew members to identify and avoid this and other special status species.

Silver-haired bat (*Lasionycteris noctivagans*)
Status: SSC
Habitat Requirements: Silver-haired bat (*Lasionycteris noctivagans*): The silver-haired bat is primarily a coastal and montane forest dweller, roosting and foraging within lower montane coniferous forest, oldgrowth, and riparian forests. Roosting habitat consists of within hollow trees, beneath exfoliating bark, abandoned woodpecker holes, snags, buildings, caves and rarely under rocks. *L. noctivagans* feeds over streams, ponds and open brushy areas.
Potential for Occurrence: There is moderate potential for this species to occur within the project area. Potential habitat is present in large trees or snags in the project area as well as buildings and caves. Several mines are mapped within the project area, no open mines were discovered during reconnaissance. The closest known occurrence is a 1924 collection 2 miles east of the project area.
Potential Project Impact: There is low potential for impact to this species. Existing structures are not proposed for alteration; Large trees and snags will be retained. Broadcast burning treatments are not expected to impact this species due to the insulation against sounds and temperature provided by caves and mines. The implementation of SPR BIO-2 will train crew members to identify and avoid this and other special status species.

Amphibians and Reptiles

California Giant Salamander (*Dicamptodon ensatus*)
Status: SSC
Habitat Requirements: California *Dicamptodon* salamanders are year-round residents of California. In 1989, these salamanders were split into two species – California giant salamander (*Dicamptodon ensatus*) occurring south of the Mendocino County line and the coastal giant salamander (*Dicamptodon tenebrosus*) occurring in the north (Thomas et al. 2016). A hybrid zone exists approximately 6 miles north of Gualala; however outside of this area, the two species are known to be distinct (Thomas et al. 2016).
This species occurs in wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.
Potential for Occurrence: There is a high potential for occurrence of this species. Suitable habitat is present in class 1 and 2 watercourses throughout the project area. No individuals were observed during reconnaissance. There are multiple known observations within the project area. The most recent is a 2000 observation during electrofishing surveys in Big Sulphur Creek, this is located in the phase two treatment unit on the southern border. Followed by a 1987 collection of three individuals in an unnamed tributary to Big Sulphur Creek above unit 3 near the edge of Unit 1B. A 1925 collection of one larva in an unnamed tributary to Kelsey Creek on the northeast slope of Cobb Mountain. Mapped circle overlaps phase two. A 1919 collection of one adult at Castle Rock Springs, a tributary of Anderson Creek. This collection is mapped along the eastern edge of unit 7. As well as a 1890-1911 collection of

one adult in Glenbrook, just north of the project area but mapped into a portion of phase 2. Date and exact location not recorded, likely collected from Alder Creek or Kelsey Creek.
Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. BIO-2 crew training will ensure all crew members can identify this species and avoid harming them during vegetation treatments.

California Red-Legged Frog (*Rana draytonii*)
Status: FT, SP, SSC
Habitat Requirements: California red-legged frogs (CRLF) primarily inhabit permanent or nearly permanent water sources (quiet streams, marshes, and ponds). Breeding tends to occur primarily in ponds, less likely in streams, and happens from November to April. This ranid frog will also use upland habitats outside of the breeding season and may be discovered under logs, rocks, and other debris during wet conditions. CRLF were historically believed to prefer only habitats and shorelines with extensive vegetation.
Potential for Occurrence: There is a moderate to high potential for this species to occur in the streams or ponds within the project area. No individuals were observed during reconnaissance. The closest known observation is a 1945 collection near the edge of the project area in the forest lake resort community along Putah Creek, mapped less than 900 feet into the project area in the phase 2 treatment unit.
Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. SPR BIO-2 crew training will ensure all crew members can identify this species and avoid harming them during vegetation treatments.

Foothill Yellow-Legged Frog *(Rana boylii)*
Status: SSC; CDFW determined this species not to be special status within the coastal range.
Habitat Requirements: Foothill Yellow-Legged Frogs (FYLF) are associated with lower elevation streams draining the Pacific slope from west-central Oregon to northwestern Baja California. They have declined from over 50% of their historic range. Foothill yellow-legged frogs occupy a diverse range of ephemeral and permanent streams, rivers, and adjacent moist terrestrial habitats over the course of their complex life history. FYLF reproduce in the spring by depositing egg masses into glide habitats within larger watercourses (typically Class I waters). Egg masses are deposited on the down-stream side of cobble size rocks during April-May. Larval forms (tadpoles) rear in watercourses until early fall. Post-metamorphic frogs tend to stay in close proximity to their water source. Adults can migrate down the drainage network to channels that are broad and more sunlit. Seasonal variation in streamflow has a strong influence on life history and movement. Breeding and rearing typically occur in open sunny portions of class I and II watercourses which are gently flowing and low gradient.
Potential for Occurrence: There is a high potential for this species to occur in the suitable habitat within streams or ponds in the project area. No individuals were observed during reconnaissance. There are 15 known observations, according to CNDDB, within the project area.
The most recent being 124 individuals caught and released in 2017 in Mayacamas creek, a tributary of Big Sulphur Creek. Other observations are in class 2 watercourses throughout the treatment area, this species is locally abundant and is not expected to be adversely impacted by treatment.
Potential Project Impact: The potential for the project to impact this species is very low. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. BIO-2 crew training will ensure all crew members can identify this species and avoid harming them during vegetation treatments.

Red-Bellied Newt (*Taricha rivularis*)
Status: SSC
Habitat Requirements: The red-bellied newt ranges within Mendocino, Sonoma, Humboldt, and Lake Counties. They are predominantly found in redwood forests, along the coast, however have also been detected in Douglas-fir, tan oak, mixed conifer, valley-foothill woodland, montane woodland, hardwood-conifer and madrone forest types, particularly when near streams. The preferred aquatic breeding habitats are moderate to fast-flowing streams with rocky substrates. Breeding coincides with the receding of streams after heavy winter rains. Adults are terrestrial and the aquatic breeding phase

lasts from February to May. After breeding, adults leave streams but usually stay in the same drainage; however, they are also known to travel several kilometers between breeding years. Underground retreats are used from May to October, and adults forage on the surface before and as they migrate to streams. (Thomas et al. 2016).
Potential for Occurrence: There is a high potential for this species to occur. There are three known observations within the project area. The first is along the road above unit 3 and Big Sulphur Creek; 6 individuals collected in 1951, 2011, and 2012. In 1991, 19 individuals were collected from Big Sulphur Creek near the corner of units 1A, 1B, and 3. 2 individuals were collected in 1969 and again in 1977 16 miles NE of Geyserville, mapped at Cobb Mountain in the phase 2 treatment unit.
Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation. This will protect this species during its breeding period, immediately following heavy winter rain events. BIO-2 crew training will ensure all crew members can identify this species and avoid harming them during vegetation treatments.

Western Pond Turtle *(Emys marmorata)*
Status: None, Candidate for listing as Federally Threatened
Habitat Requirements: The pond turtle is associated with permanent ponds, lakes, streams, or permanent pools along intermittent streams in a wide variety of habitats. It requires basking sites in the aquatic environment, grassy openings for nest sites, and nests are typically within 100 meters of a water source, although nests up to 500 meters have been recorded (Thomas et al. 2016).
Potential for Occurrence: There is a moderate to high potential for this species to occur. The closest known observation is on the northern edge of the project area.
Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Nest sites near the project area have the potential to be impacted if located outside of the WLPZ. SPR BIO-2 will require training for workers to identify and avoid nesting sites during treatment.

Insects

Obscure Bumblebee (*Bombus caligninosus)*
Status: SSC
Habitat Requirements: The obscure bumble bee is a species of bumblebee native to the west coast of the United States, where its distribution extends from Washington through to Southern California. The workers are most often seen on Fabaceae, the legume family, while queens are most often seen on Ericaceae, the heath family, and males have been observed most often on Asteraceae, the aster family. Common plants visited by the workers include ceanothus, thistles, sweet peas, lupines, rhododendrons, Rubus, willows, and clovers.
Potential for Occurrence: There is a moderate to high potential for this species to occur, habitat does exist within the project area. The closest known observation is a 1963 collection near the northern edge of the project area. No individuals or hives were encountered during field reconnaissance
Potential Project Impact: There is a low potential for impact to this species. Grassland and oak woodland habitats are not targeted for intensive treatments. Prescribed burning treatments are expected to have a positive impact on this species by improving habitat quality.

Ricksecker's water scavenger beetle (*Hydrochara ricksecker*i)
Status: SSC
Habitation Requirements: Habitat is considered unknown, however individuals have been observed in artificial ponds and vernal ponds, and adults of the species are capable of flight, however are aquatic by nature. All known collection records are from December 27 to July 30 (most in April and May), which would correspond to when vernal pools are most likely to contain water (Short, Post, Toussaint, 2017).
Potential for Occurrence: There is a moderate potential for this species to occur in ponds in the treatment area. The closest known observation is at Boggs Lake just past the northern edge of the project area.
Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments.

Western bumblebee (*Bombus occidentalis*)

Status: Candidate State Endangered
Habitation Requirements: The western bumble bee was once very common in the western United States and western Canada. It is mostly currently restricted to high meadows and coastal environments. It requires floral resources, undisturbed nest sites and overwintering sites. Nesting habitat is typically underground, such as in old animal burrows, but also possibly above ground such as in cavities in logs. Overwintering sites are probably under plant litter and debris.
Flight period in California is from early February to late November, peaking in late June and late September. Western bumble bees primarily nest in underground cavities such as old squirrel burrows on open west-southwest facing slopes bordered by trees. Colonies can contain as many as 1,685 workers and produce up to 360 new queens.
Potential for Occurrence: There is a moderate to high potential for this species to occur within the project area. One sighting occurred during initial project reconnaissance. One individual was found in the Roads treatment unit between units 2A and 2B on June 24, 2024. An additional survey covering the surrounding acre was conducted on July 16, 2024 with no individuals found. The closest known occurrence, aside from this observation, is a 1960 collection at Cobb Mountain within the project area. See attachment C maps.
Potential Project Impact: There is a low potential for impact to this species. Prescribed fire treatments are expected to have a net positive impact on habitat quality and floral resources. This is due to their lower intensity compared to wildfires which maintains seedbank integrity and promotes native plant biodiversity. This increase to floral resources will promote bee diversity through habitat improvement. Implementation of the treatments proposed in this project will also prevent large scale wildfires that burn during suboptimal weather conditions, which would damage bumble bee habitat. Thus the implementation of prescribed fire will help to prevent this otherwise damaging event from taking place, by removing excess fuel within these areas during periods of mild fire weather (i.e. a high degree of vegetation will be retained).
Mitigations: Treatments will be conducted in a patchy pattern to the extent feasible in suitable habitat, such that the entirety of the habitat is not burned or removed and untreated portions of occupied or suitable habitat are retained (e.g., fire breaks will be aligned to allow for areas of unburned floral resources for special-status bumble bees within the treatment area). Reconnaissance surveys were conducted throughout the treatment area. Although habitat was identified (most oak woodlands contain suitable habitat) only one individual of this species was positively identified and no colonies were discovered. Much of the treatment area contains overgrown chapparal and forest. These areas represent poor habitat for this species. Overall, these areas of poor habitat will be targeted for treatment by this project, because they also represent the areas of highest fire danger. Focusing on treatment in these areas will provide more habitat for this species to expand, if there are any colonies present. Impact to this species in the short term will not be significant and the long term effect of the project on this species is expected to be a net benefit through habitat creation and improvement.

Fish

Steelhead *(Oncorhynchus mykiss)* Central California Coast DPS
Status: Federally Threatened/Species of Special Concern.
Habitat Requirements: Inhabits class I watercourses. Adults return to their natal watercourses in the winter and spring to spawn. Juveniles spend from 1 year to their entire lives rearing in freshwater environments before migrating to the ocean. Habitat requirements for steelhead are similar to Coho, and vary depending on temporal, spatial variables and a fishes' life-stage. The major life stages for most anadromous salmonids include the upstream migration of adults, spawning, incubation, juvenile rearing, and seaward migration of smolts. Combined, the generalized habitat requirements for all life stages of the steelhead include suitable stream flow, accessibility to spawning sites, suitable substrate composition for spawning and rearing, fish food production, water temperature and summer refugia areas. (from N CA description)
Potential for Occurrence: There is high potential for occurrence within the class I watercourses in the project area. There is a known observation within the project area in Mayacamas Creek, a tributary to Big Sulphur Creek; 207 adults and 270 juveniles were observed at sample stations in 1998.
Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments**.**
Mitigations: No potential impact with the following mitigations. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent sedimentation of

watercourses. During periods where overland flow may occur, ground disturbing activity will cease. SPR BIO-2 will require training for workers to identify and protect this species.

Crustaceans

California linderiella (*Linderiella occidentalis*)
Status: Non-listed
Habitat Requirements: The California linderiella is widely distributed in California. It can be found in seasonal ponds and the habitats may be very small.
Potential for Occurrence: There is a moderate potential for this species to occur. The closest known observation is at Boggs Lake just outside the northern border of the project area.
Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments.

Conclusion

The potential for treatment activities to result in adverse effects on special status species was examined in the PEIR. The impact is within the scope of the PEIR because the treatment activities and intensity are consistent with those analyzed in the PEIR. See attachment B for the full analysis of potential listed and non-listed species resulting from SPR BIO-1. With the included SPRs and mitigation measures listed above, the potential impact to sensitive species will be less than significant.

Impact BIO-3
There is a potential for the treatment activities to impact designated sensitive natural communities. Riparian areas have the potential to be impacted by operations and this was analyzed in the PEIR. With the inclusion of the SPRs listed above this impact will be less than significant.

All riparian habitats shall be protected with the provisions of HYD-4 and BIO-4, through the establishment of a WLPZ buffer. See BIO-4 regarding treatment specifications for riparian habitats. Treatments within this buffer were designed to protect the biological function of these sensitive communities. All riparian habitats are mapped as springs, wet areas, ponds, and Class I or II watercourses. BIO-4 will be implemented within the slope and class dependent WLPZ buffer. See attachment A.

Areas with serpentine soil are mapped, see attachment C, and will be protected. No mechanical treatment will occur in these areas. Any prescribed fire treatments in the mapped serpentine soil areas will be designed to burn with lower intensity. Botany surveys were conducted to identify possible sensitive species in these areas, species found are in mapped botany STZ's, see attachment C.

Impact BIO-4

No federally protected wetlands exist within the project area.

Impact BIO-5
According to the PEIR, the treatment activities could result in direct or indirect adverse effects on "wildlife corridors". In the analysis of the PEIR by the environmental consulting firm who completed it, wildlife corridors - considered to be uncharacteristically thick chaparral or overgrown forest type, which has been caused by fire suppression over the last 200 years. It is important to note that the vast majority of these overgrown forest types (which are being referred to as "wildlife corridors") are actually not what most of the wildlife species have evolved to thrive in. Although it is important to have a small portion of thick, dense shrub and/or overgrown forest for small mammals, birds, and other species to utilize as refugia, it is important to note that most large bodied mammals are disadvantaged in this kind of habitat. Essentially, the type of habitat that a deer requires is far different from a squirrel, and so on. Much of the project area is overgrown with thick chaparral which provides cover for deer to hide but makes poor habitat for feeding and movement. This is also true for a variety of bird and other mammal species that rely on open grassy areas for hunting and foraging. The treatments as proposed will increase early successional habitat which is critically imperiled over a large percentage of this project area. See the forest types map in attachment C. Overall, "wildlife corridors" are overabundant here and not at risk from these proposed treatments. This particular project – and most similar forest thinning projects in northern CA – will improve wildlife corridors by increasing early successional habitat, which is severely lacking.

Nevertheless, these potential impacts to "wildlife corridors" were found to be within the scope of the PEIR. The proposed treatment activities are also within the scope because they are the same as those analyzed in the PEIR. In fact, it is expected that some wildlife corridors for certain species will ultimately be improved by the treatment activities. By protecting the forest ecosystem as a whole, the habitat corridors, will also be protected from high intensity wildfire in the future. This will conserve corridors in the long run and promote a healthy fire resilient ecosystem. Furthermore, with the inclusion of the riparian zone protections, and the fact that not all treatments within this large project area will be able to be completed within a short time frame, there will be areas of intact wildlife corridors which connect multiple treatment areas to untreated landscapes.

Impact BIO-6
The treatment activities do not have the potential to result in the reduction of habitat or abundance of common wildlife. There is expected to be an increase in habitat for species throughout the treatment area, due to the removal of dead and down, as well as invasive species and the return of the forests to a historically accurate stocking level. Furthermore, the consequences of a devastating wildfire would be catastrophic to wildlife and their habitat. By taking steps to reduce standing dead and down fuels and improve fire resiliency of existing habitat, the potential for such a wildfire to occur will be greatly reduced. Because of this, the project as proposed will not have a significant negative impact to common wildlife habitat or individuals and a long-term increase and net benefit to habitat and wildlife is expected. See justification for impact BIO-5 above. The treatment activities are consistent with those analyzed in the PEIR and are therefore within the scope of the PEIR.

Impact BIO-7
This impact does not apply to the treatment areas.

Impact BIO-8
This impact does not apply to the treatment areas.

CalVTP Addendum: Change to Geographic Extent
The inclusion of land that is outside of the treatable landscape presented in the PEIR, constitutes a change in the geographic extent presented in the PEIR. The habitat conditions and characteristics as well as the biological resources present in these areas are the same as those within the treatable landscape. This is because the areas which fall outside of the treatable landscape are very close in range to the areas within. Generally, these species do not adhere to the "treatable landscape" as it is mapped, which is imperfect and doesn't contain all forest types or extents. Furthermore, the analysis above and in attachment B looks at all potential species and habitats which are specific to this project as shown on the maps in attachment C. There are no species which are not examined due to the "treatable landscape". Consequently, the impact will be the same and is within the scope of this PEIR for all of the above listed impacts.

PD-3.7: GEOLOGY, SOILS, PALEONTOLOGY, AND MINERAL RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact GEO-1: Result in Substantial Erosion or Loss of Topsoil	LTS	Impact GEO-1, pp. 3.7-26 – 3.7-29	Yes	GEO-1 through GEO-8, AQ-3, AQ-4	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-4, GEO-7, GEO-8, AQ-3	NA	LTS	No	Yes

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

LTS: Less than Significant; LTSM: Less than significant with mitigation; PSU: Potentially Significant and unavoidable; PS: Potentially Significant

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

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

Discussion

Impact GEO-1

There is a potential for the treatment activities to cause erosion and loss of topsoil. This impact was examined in the PEIR and determined to be less than significant. The proposed project is within the scope of the PEIR because the treatment activities are the same as those examined in the PEIR. Furthermore, with the inclusion of SPR GEO-1-8, the impact will be reduced to a level of insignificance. By postponing ground disturbing operations during saturated soil conditions and implementing the erosion control measures outlined in the SPRs the project proponent will ensure the topsoil is protected.

- For SPR GEO-3: It is not practicable to treat all exposed soil with mulch after a prescribed fire which exposes more than 50% of the soil surface within a treatment area. First off, this would defeat the purpose of removing flammable material for the health of an ecosystem, which has been identified as having too much fuel. By adding mulch to an area that was just burned, the project proponent would essentially be putting fuel back on the landscape. Next, these forests are highly adapted to fire, meaning they are equipped to restore ground cover quickly in order to prevent catastrophic top soil loss in the long term. Finally, the scale in which fire is used on a landscape, is such that the degree of soil exposed can be up to 100 or more acres.

For these reasons, it is unreasonable to assume that mulching or otherwise stabilizing all exposed soils treated with fire. The project proponent will only stabilize disturbed soil as a result of prescribed fire, immediately around road watercourse crossings and potentially unstable areas.

Impact GEO-2

The treatment activities would include vegetation removal from steep slopes. An RPF will assess the treatment areas on slopes over 50% to identify potentially unstable areas and soils prior to a project. Unstable areas that were identified by the RPF during reconnaissance are mapped. If additional unstable areas are discovered, they will be amended to the maps. See appendix C for a map of these potential unstable areas. Operations will not occur within these areas unless reviewed by a licensed geologist.

Impact GEO-2 is within the scope of the PEIR because the treatment activities are the same as those assessed in the PEIR.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscape presented in the PEIR, constitutes a change in the geographic extent presented in the PEIR. The geology and soils of the project area not included in the treatable landscape are similar to and will receive the same assessments as areas within the treatable landscape. The reason these areas were not included in the treatable landscapes was an oversight during the PEIR development based on vegetation types and low-resolution mapping. Areas were not dis-included due to soils types in particular. Soil does play a role in the vegetation community structure but is not the sole driver. Things like aspect, slope, and climate also play a major factor in this. For this reason, soil types and geology are represented equally within the treatable and non-treatable landscape and the erosion potential is very similar if not the same. More importantly than the difference between the treatable landscape and non-treatable landscape, is that the treatment activities are the same. These are the main drivers for the potential impacts to soil resources, not the ecosystem or soil types. Consequently, the impact will be the same and is within the scope of this PEIR for all of the above listed impacts within the additional area.

PD-3.8: 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.

LTS: Less than Significant; LTSM: Less than significant with mitigation; PSU: Potentially Significant and unavoidable; PS: Potentially Significant

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

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

Discussion

Impact GHG-1

Use of vehicles/equipment and prescribed burning during treatment activities will result in greenhouse gas emissions. Conflicts with applicable plans, policy, and regulations aimed at reducing GHG emissions may occur due to this project. This was examined in the PEIR. These impacts associated with this project are within the scope of the PEIR because the treatment activities, types of equipment, and duration of use are the same as those analyzed in the PEIR. Furthermore, by carrying out the project in this way, the goal will be to reduce the likelihood of a catastrophic wildfire from occurring. This type of event would create a massive GHG emission at one time. The controlled release of GHG in small amounts during this project is less impactful than the, all at once, release which is likely to occur during a catastrophic wildfire. SPR GHG-1 is not applicable to the proposed project because the property is not a registered carbon offset property. As such, the requirement to inform reporting under the Board of Forestry and Fire Protection's assembly bill 1504 Carbon Inventory Process does not apply.

Impact GHG-2

Use of vehicles/equipment and prescribed burning during treatment activities will result in greenhouse gas emissions. This was examined in the PEIR. These impacts associated with this project are within the scope of the PEIR because the treatment activities, types of equipment, and duration of use are the same as those analyzed in the PEIR. SPR GHG-1 is not applicable to the proposed project because the property is not a registered carbon offset property. As such, the requirement to inform reporting under the Board of Forestry and Fire Protection's assembly bill 1504 Carbon Inventory Process does not apply. Mitigation measure GHG-2 will be applied to reduce the GHG emissions during prescribed fire activity. These measures, such as mosaic burning, low fuel consumption, and retention of LWD/snags will provide for Biochar production, carbon sequestration, and reduced carbon emissions. With the

implementation of this mitigation measure, the impact was determined to be potentially significant and unavoidable. This is based on a good faith determination made by the board of forestry and does not necessarily indicate and actual significant impact. In fact, the determination seems to be made based on a lack of data rather than an indication of actual proof of significant impact related to these treatments.

The project proponent expects a net benefit to carbon emissions due to the protection and conservation of forest resources associated with these types of treatments. A healthy growing forest is expected to sequester more carbon than a forest starting from square one after a complete stand replacing fire. Likewise, a decadent overstocked forest which has slowed growth significantly, will sequester less carbon, than one which is adapted to intermediate disturbances - such as those treatments proposed by this project. Thus, the project proponent disagrees with the PEIR determination that this impact is significant and unavoidable, even when considering the avoided impact of a catastrophic wildfire. Instead, this project is expected to have a less than significant impact on greenhouse gas emissions through the development of a healthy resilient forest, which is proven to grow faster – putting on more wood every year (i.e. sequestering more carbon). Furthermore, research has proven that disturbance in a forest ecosystem promotes an increased growth rate than one in which there is a significant lack of disturbance. Nevertheless, the PEIR impact will be listed in the table above and the mitigation measure prescribed will be implemented, where feasible.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscape presented in the PEIR, constitutes a change in the geographic extent presented in the PEIR. The wildfire fuel conditions as well as the potential for greenhouse gas released by treatments in these areas is very similar to those within the treatable landscape. The treatment activities will be the same within both areas, which is the main driver for potential impacts to GHG emissions. The areas outside of the treatable landscape which are being added to the project have a lower fuel load over all, since they are generally the grassland/oak woodland forest types. The result will be less treatment of fuel per acre, which would result in a less significant impact than what was assessed in the PEIR. Consequently, the impact will be the same or less and is within the scope of this PEIR for all of the above listed impacts.

PD-3.9: ENERGY RESOURCES

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact ENG-1: Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy	LTS	Impact ENG-1, pp. 3.9-7 – 3.9-8	Yes	NA	NA	LTS	No	Yes

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

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

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

Discussion

Impact ENG-1

The impact to energy resources as a result of this project would be the same as described in the PEIR. This impact was determined to be less than significant and unavoidable. The impact is expected to decrease over time as equipment and methods used for vegetation management become more efficient.

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent of the PEIR. However, the energy use outside of the treatable landscape is expected to be highly similar, if not the same as within it (for this project). This is because the vegetation types, fuel types, and slopes are mostly consistent throughout. Likewise, the equipment used will not vary.

There are some areas being included which contain a large proportion of grassland in contrast to thick timber and chaparral associated with the treatable landscape. In these areas we would expect to see a net reduction in energy consumption during treatments, due to the lower level of fuel loading per acre, when compared to the conifer and oak woodland forests within the treatable landscapes.

PD-3.10: 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, HYD-4	NA	LTS	No	Yes
Impact HAZ-2: Create a Significant Health Hazard from the Use of Herbicides	LTS	Impact HAZ-2, pp. 3.10-15 – 3.10-18	Yes	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	LTSM	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.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation

New Hazardous Materials, Public Health and Safety Impacts: Would the treatment result in other impacts related to hazardous materials, public health and safety that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

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

Discussion

Impact HAZ-1

The proposed treatment activities would require the use of fuels and related accelerants, which are hazardous materials. The potential for these treatment activities to cause a significant health hazard was examined in the PEIR and determined to be Less than significant with the inclusion of the SPRs listed above. This impact is within the scope of the PEIR because the treatment activities, associated equipment, and types of hazardous materials used are the same as those analyzed in the PEIR.

Impact HAZ-2

Herbicide application may be utilized to control invasive non-native plants/trees, as well as reduce the level of resprouting within fuel breaks. Application will be achieved by ground methods only (no aerial spraying will occur). The target plant will be backpack sprayed or cut and stump painted. The potential for treatment activities to cause a significant health hazard was examined in the PEIR. This impact is within the scope of the PEIR because the types of herbicides and the application methods proposed are the same as those analyzed in the PEIR. With the implementation of SPRs HAZ-5 through HAZ-9, the impacts were determined to be less than significant.

Impact HAZ-3
Soil disturbance during mechanical treatments and prescribed burning have the potential to expose workers, the public and the environment to existing hazardous materials, if present within the treatment areas. This impact was examined in the PEIR and determined to be potentially significant, and less than significant after mitigation. The impact is the same for this project because the treatment types and potential hazardous materials are the same. There is potential for unknown hazardous waste sites within the project area, with the implementation of MM HAZ-3 this impact is reduced to the level of insignificance. There is one known contamination site within the project area, a 100-acre site used to detonate explosives, no further cleanup activity is required at this site as of 2006. This area will not be targeted for treatment as it is in the phase 2 planning unit.

MM HAZ-3 is, as stated in the PEIR, Hazardous Materials, Public Health and Safety section 3.10 Pg 19,

> "Prior to the start of vegetation treatment activities requiring soil disturbance (i.e., mechanical treatments) or prescribed burning, CAL FIRE and other project proponents will make reasonable efforts to check with the landowner or other entity with jurisdiction (e.g., California Department of Parks and Recreation) to determine if there are any sites known to have previously used, stored, or disposed of hazardous materials. If it is determined that hazardous materials sites could be located within the boundary of a treatment site, the project proponent will conduct a DTSC EnviroStor web search (https://www.envirostor.dtsc.ca.gov/public/) and consult DTSC's Cortese List to identify any known contamination sites within the project site. If a proposed mechanical treatment or prescribed burn is located on a site included on the DTSC Cortese List as containing potential soil contamination that has not been cleaned up and deemed closed by DTSC, the area will be marked and no prescribed burning or soil disturbing treatment activities will occur within 100 feet of the site boundaries. If it is determined through coordination with landowners or after review of the Cortese List that no potential or known contamination is located on a project site, the project may proceed as planned."

CalVTP Addendum: Change to Geographic Extent

The inclusion of land that is outside of the treatable landscapes constitutes a change to the geographic extent presented in the PEIR. However, the hazardous materials used, the environmental conditions, and the exposure potential is the same as what was analyzed in the PEIR. Furthermore, the regulatory conditions and policies are the same. As a result, the inclusion of land outside of the treatable landscape is within the scope of the PEIR. There is not expected to be a significant change in the potential hazardous impact outside of the treatable landscape.

PD-3.11: 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	HYD-1, HYD-4, GEO-4, GEO-6, AQ-3, BIO-4, BIO-5	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	HYD-1, HYD-2, HYD-4, HYD-5, HYD-6, GEO-1, GEO-2, GEO-3, GEO-4, GEO-5, GEO-7, GEO-8, BIO-1, HAZ-1, HAZ-5	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	HYD-3,	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	HYD-1, HYD-4 HYD-5, BIO-4, HAZ-5, HAZ-6 HAZ-7	NA	LTS	No	Yes

Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact HYD-5: Substantially Alter the Existing Drainage Pattern of a Treatment Site or Area	LTS	Impact HYD-5, p. 3.11-31	Yes	HYD-4, HYD-6, GEO-1, GEO-2, GEO-5	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.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation

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

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

Discussion

There are 8 watersheds within the treatment area. These watersheds are High Valley Creek, Upper Kelsey Creek, Mayacamas Creek, Fraiser Creek, Middle Big Sulphur Creek, Upper Big Sulphur Creek, Anderson creek, and Upper Little Sulphur creek. The two receiving rivers for these watersheds are the Sacramento River and the Russian River.

Upper Kelsey Creek is a 8,772-acre watershed with 2,662 acres in the project area. Kelsey Creek is the watercourse before it flows into the High Valley Creek watershed. High Valley creek is a 10,215-acre watershed with 1,627 acres in the project area. In this watershed High Valley Creek flows into Kelsey Creek. Then outside the watershed into Clear Lake and eventually Cache Creek and the Sacramento River. The Anderson Creek watershed is 12,154 acres with 5,950 acres in the project area. This watershed holds Anderson creek, Bear Canyon Creek, and Gunning Creek which flow into Putah Creek then Lake Berryessa and eventually the Sacramento River.

Mayacamas Creek is a 9,110-acre watershed with 6,101 acres in the project area. Mayacamas Creek flows through this watershed until it reaches Big Sulphur Creek. Fraiser Creek is a 4,951-acre watershed with 242 acres in the project area. Frasier creek flows into Big Sulphur Creek as it flows out of the project area. The Upper Big Sulphur Creek watershed is 7,473 acres with 5,852 acres in the project area. Middle Big Sulphur Creek is a 5,810-acre watershed with 4,167 acres in the project area. Big Sulphur Creek begins in the Upper Big Sulphur Creek watershed and runs through the Middle Big Sulphur Creek then Frasier Creek watersheds and out of the project area to the Russian River. Upper Little Sulphur Creek is a 7,034-acre watershed with 633 acres in the project area. Little Sulphur Creek begins in this watershed and flows into Big Sulphur Creek outside of the project area. The Russian River Hydrologic Unit, Middle Russian River Hydrologic Area, Big Sulphur Creek Hydrologic Sub-Area which includes the Mayacamas Creek, Frasier Creek, Middle Big Sulphur Creek, Upper Big Sulphur Creek, and Upper Little Sulphur Creek watersheds, are 303(d) listed for Sedimentation/Siltation and Temperature. Hydrologic units are areas which drain towards a certain watercourse, the Russian River HU, Middle Russian River HA, Big Sulphur Creek HSA is the sub-area which drains into Big Sulphur Creek.

The long-term effect of this project on watercourse health will be positive. Although treatment has the potential to create detrimental conditions to water quality over the short term, the included SPRs will prevent the impacts below. The project will reduce fuels in a planned and controlled way, reducing the risk of an unplanned wildfire, which would have a severely negative impact to all HYD subjects below. The goals of this project are to restore these ecosystems to a fire-resilient structure which will drastically improve the health of these 8 watersheds, which are imperiled. Wildfires which remove 1,000s of acres of forestland from a watershed at once is the greatest threat to water quality and overall health. Because this project affects such a large portion of these watersheds (between 25%-75%), their protection through pre-emptive action will have a profoundly positive effect on water quality for the local communities as well as the state of California.

Impact HYD-1
Ash and debris from prescribed burning could be washed by runoff into drainages and streams and this potential impact was assessed in the PEIR. To prevent this impact, treatment areas are designed to avoid streams and watercourses, while implementing erosion control measures as described in the SPRs. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from this treatment activity. See HYD-4 in the SPRs in attachment A. This impact was assessed in the PEIR and found to be less than significant with the implementation of the SPRs listed above. The treatment activity is within the scope of the PEIR because it is designed to be a low intensity prescribed burn, which is the same as what was analyzed in the PEIR. Chaparral is planned to be burned at an appropriate interval to prevent converting this ecotype. Chaparral will be burned in patches to prevent exposing large areas of bare soil within the project area and avoid hydrolyzing the soil. These burn unit designs will follow the SPR's listed for the impact in the table above to ensure this impact remains less than significant.

Impact HYD-2
Vegetation treatments will include mechanical and manual methods. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from this treatment activity. See HYD-4 in the SPRs in attachment A. This will significantly limit activities within the WLPZs and class IIIs to lower this impact to a level of insignificance. Heavy equipment shall not be used when saturated soil conditions exist, preventing compaction, soil loss, and sedimentation. Waterbars shall be installed where necessary, as outlined in the SPRs, to prevent sedimentation. This

includes, existing roadway drainage structure protection, as well as areas exposed during mechanical treatments.

Mechanical treatments will most often entail mastication, which provides erosion control innately during treatment. The chips created during this type of treatment will act as a mulch, covering any freshly exposed soil, preventing soil loss during heavy rain events. Erosion control monitoring shall ensure all facilities are functioning and exposed soil is not at risk of delivering to any class I, II, or III watercourses. Impact HYD-2 was assessed in the PEIR and found to be less than significant with the implementation of the listed SPRs. The treatment activity is within the scope of the PEIR because it is the same as what was analyzed in the PEIR.

Impact HYD-3
Prescribed herbivory does have the potential to violate water quality standards, but with the inclusion of the SPRs listed in the table above, the impact will be less than significant. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from this treatment activity. See HYD-3 in the SPRs in attachment A. This impact was assessed in the PEIR and found to be less than significant. The treatment activity is within the scope of the PEIR because it is the same as what was analyzed in the PEIR.

Impact HYD-4
The use of herbicide has the potential to violate water quality standards. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from this treatment activity. See SPRs in attachment A. These SPRs pertinent to this impact were designed to prevent herbicide from entering waterways in amounts deleterious to water quality. SPR HAZ-5 requires the project proponent to prepare a spill prevention and response plan prior to beginning any herbicide treatment activities. This will mitigate potential impacts associated with spilled chemicals reaching waterways. Herbicide use will comply with application regulations as per SPR HAZ-6. Use will be coordinated with the County Agricultural Commissioner, and all required licenses and permits will be obtained prior to herbicide application. All herbicide applications will be implemented consistent with recommendations prepared annually by a licensed PCA.

This impact was assessed in the PEIR and found to be less than significant with the implementation of the SPRs listed above. The treatment activity is within the scope of the PEIR because it is the same as what was analyzed in the PEIR and all SPRs listed in the table above shall be implemented prior to initiation.

Impact HYD-5
Treatment activities could cause ground disturbance and erosion, which could directly or indirectly modify existing drainage patterns. WLPZs and class III watercourse protection measures will ensure adequate filter strips to avoid significant impacts from these treatment activities. The SPRs listed above will require waterbar placement where erosion and runoff are highly likely, as well as require repair and maintenance of existing drainage and erosion control infrastructure. For instance, all existing drainage structures are required to be marked prior to treatment activities to facilitate re-establishment prior to the first significant rain event. This doesn't mean existing erosion control issues will be fixed, but rather all erosion control devices functioning pre-project implementation shall be maintained.

Impact HYD-5 was assessed in the PEIR and found to be less than significant with the implementation of the listed SPRs. The treatment activities are within the scope of the PEIR because they are the same as those analyzed in the PEIR.

CalVTP Addendum: Change to Geographic Extent

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, topography, vegetation types and treatment methods are consistent with those analyzed in the PEIR, thus they are also within the scope of the PEIR. Furthermore, the existing environmental and regulatory conditions pertinent to hydrology and water quality are the same. Furthermore, the "treatable landscapes" model does not take into account watersheds and tends to bisect them in many places. This is not a great way to manage forestland since these watersheds should be assessed and treated as a whole. Including these areas will allow the project proponent to positively affect each watershed without artificial boundaries, resulting in an improved function and quality throughout.

PD-3.12: 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	No	NA	NA	NA	NA	NA
Impact LU-2: Induce Substantial Unplanned Population Growth	LTS	Impact LU-2, pp. 3.12-14 – 3.12-15	No	NA	NA	NA	NA	NA

[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.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation

New Land Use and Planning, Population and Housing Impacts: Would the treatment result in other impacts to land use and planning, population and housing that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

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

Discussion

Impact LU-1
Proposed treatments are not in conflict with any land use plan, policy, or regulation. Land use will not be altered by the proposed treatments.

Impact LU-2
There is no anticipated population growth as a result of the planned vegetation management treatments. There will be no need for additional housing, roads, or infrastructure as a result of these treatments.

PD-3.13: 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	No	None	NA	LTS	No	Yes
Impact NOI-2: Result in a Substantial Short-Term Increase in Truck-Generated SENL's During Treatment Activities	LTS	Impact NOI-2, p. 3.13-12	No	None	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.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation

New Noise Impacts: Would the treatment result in other noise-related impacts that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

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

Discussion

Impact NOI-1
The treatment area is not located close to sensitive noise receptors. There are no schools, nursing homes, neighborhoods, or other receptors that would be sensitive to noise within earshot of the treatment areas. Also, the project area has a high ambient noise level to begin with due to the geothermal power plant activities. The project itself will not cause a significant increase in ambient noise levels.

Impact NOI-2
Same as NOI-1

CalVTP Addendum: Change to Geographic Extent

The addition of area that is outside the treatable landscapes will not change the determination that this project is within the scope of the PEIR because there will not be a different level of noise associated with the additional area. Also, the exposure to sensitive receptors is analyzed based on the project boundaries which are independent of the treatable landscape shape.

PD-3.14: 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	No	None	NA	NA	NA	NA

[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.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation

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

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

Discussion

Impact REC-1
No recreational areas will be impacted by this project.

CalVTP Addendum: Change to Geographic Extent

The addition of areas that are outside the treatable landscapes will not change the determination that this project is within the scope of the PEIR because there will not be a different type of recreational area or use as a result. The treatment types will also be the same, meaning the degree and extent of a potential closure will not change. SPR REC-1 will be applied both within the treatable landscape and outside it.

PD-3.15: TRANSPORTATION

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact TRAN-1: Result in Temporary Traffic Operations Impacts by Conflicting with a Program, Plan, Ordinance, or Policy Addressing Roadway Facilities or Prolonged Road Closures	LTS	Section 3.15.2; Impact TRAN-1 pp. 3.15-9 – 3.15-10	No	NA	NA	NA	NA	NA
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, HYD-1, HYD-2, 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	AQ-1; *See exclusions in discusion*	PSU	No	Yes

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

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation

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

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

Discussion

Impact TRAN-1
NA

Impact TRAN-2
Smoke generated during prescribed burning operations may necessitate the implementation of a Traffic Management Plan (TMP). The need for this will be assessed during the preparation of the prescribed burn based on weather, location of burn and orientation to local traffic patterns. It is highly unlikely that a TMP will be necessary, due to the light traffic which occurs around the project area and restricted public access. This impact was assessed in the PEIR. The impact of this project is within the PEIR because the treatment activity is the same as what was covered in the PEIR. A traffic plan for this reason is not anticipated, with this specific project. Burning is often suspended on days where weather conditions prevent smoke from exiting the atmosphere quickly.

Impact TRAN-3
This impact was examined in the PEIR and this projects impact determination is the same because the project utilizes the same treatment methods and equipment.

The overall impact was determined to be Potentially significant and un-avoidable by the PEIR. Mitigation measure AQ-1 will be applied where feasible and will, along with the SPRs, reduce the impact. The following mitigation measures listed under AQ-1 will not be applied due to lack in technology and infeasibility at the local level:

- Electric and gasoline-powered equipment will be substituted for diesel-powered equipment.

    - *Currently there are no alternatives available which offer the functional ability to handle the workload required for the treatment activities. Diesel engines are the most efficient and widely available option for completing fuels treatments, particularly with regards to mechanical treatment activities. Furthermore, gasoline engines lack the torque required to complete treatments on steep slopes under extreme loads. This is where Diesel engines have an advantage, allowing treatment on areas which would otherwise be untreatable. Diesel powered equipment also has a greater workload ability, allowing work to be completed faster. This has both an economic impact to the project as well as a reduced duration of air quality offense.*

      Lithium-ion batteries lack the range and charging speed to allow "theoretical" electric powered heavy equipment to complete the job within any sort of real-world efficiency. Because the jobs are so far from any charging station, it would be necessary to have a mobile charging source. That charging source would likely require a gas-powered generator to work (due to the location of the proposed treatments), thus defeating the purpose of the mitigation measure.

      Ultimately, the technology is lacking, both locally and elsewhere, to include this mitigation measure as a feasible option.

CalVTP Addendum: Change to Geographic Extent

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 doesn't contain areas which introduce new regulatory environments or change the impact on transportation as analyzed.

PD-3.16: PUBLIC SERVICES, UTILITIES AND SERVICE SYSTEMS

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact UTIL-1: Result in Physical Impacts Associated with Provision of Sufficient Water Supplies, Including Related Infrastructure Needs	LTS	Section 3.16.1 pp. 3.16-2 – 3.16-3; Impact UTIL-1 p. 3.16-9	Yes	NA	NA	LTS	No	Yes
Impact UTIL-2: Generate Solid Waste in Excess of State Standards or Exceed Local Infrastructure Capacity	PSU	Section 3.16.1 pp. 3.16-3 -3.16-5; Impact UTIL-2 pp. 3.16-10 – 3.16-12	No	NA	None	NA	NA	NA
Impact UTIL-3: Comply with Federal, State, and Local Management and Reduction Goals, Statutes, and Regulations Related to Solid Waste	LTS	Section 3.16.2 pp. 3.16-6 – 3.16-7; Impact UTIL-2 p. 3.16-12	No	NA	NA	NA	NA	NA

[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.

LTS: Less than Significant; PS: Potentially Significant; LTSM: Less than Significant after Mitigation

New Public Services, Utilities and Service System Impacts: Would the treatment result in other impacts to public services, utilities and service systems that are not evaluated in the CalVTP PEIR?	☐ Yes	☒ No	If yes, complete row(s) below and discussion

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

Discussion

Impact UTIL-1
Treatments involve the use of prescribed burning, which may require water usage if the burn goes out of prescription. Also, water may be utilized for dust abatement as described in the SPRs. The potential increased demand for water was examined in the PEIR. The impact is within the scope because the activities scope and duration are the same as those analyzed in the PEIR. The amount of water potentially required was assessed in the PEIR and found to be less than significant.

Impact UTIL-2
Vegetation biomass and other material will not be transported off site during operations. All vegetation shall be burned, chipped, or lopped and scattered on site.

Impact UTIL-3

NA

CalVTP Addendum: Change to Geographic Extent

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 doesn't contain new areas which when burned, will require a significant increase in the required water used for prescribed fire mop up. Also, the environmental conditions are the same as those assessed within the treatable landscape. As a result, there are not expected to be any new impacts related to UTIL-1 , 2, or 3. The included areas are within the scope of the PEIR.

PD-3.17: WILDFIRE

Impact in the PEIR			Project-Specific Checklist					
Environmental Impact Covered In the PEIR	Identify Impact Significance in the PEIR	Identify Location of Impact Analysis in the PEIR	Does the Impact Apply to the Treatment Project?	List SPRs Applicable to the Treatment Project[1]	List MMs Applicable to the Treatment Project[1]	Identify Impact Significance for Treatment Project	Would this be a Substantially More Severe Significant Impact than Identified in the PEIR?	Is this Impact Within the Scope of the PEIR?
Would the project:								
Impact WIL-1: Substantially Exacerbate Fire Risk and Expose People to Uncontrolled Spread of a Wildfire	LTS	Section 3.17.1; Impact WIL-1 pp. 3.17-14 – 3.17-15	Yes	HAZ-2, HAZ-3, HAZ-4	NA	LTS	No	Yes
Impact WIL-2: Expose People or Structures to Substantial Risks Related to Post-Fire Flooding or Landslides	LTS	Section 3.17.1; Impact WIL-2 pp. 3.17-15 – 3.17-16	Yes	AQ-3, GEO-1 GEO-2, GEO-3, GEO-4, GEO-5, GEO-8	NA	LTS	No	Yes

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

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

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

Discussion

Impact WIL-1
Treatment activities pose a risk of wildfire ignition as well as prescribed fire escaping its control lines. This potential risk was examined in the PEIR and found to be less than significant with implementation of the SPRs. This impact is within the scope of the PEIR because the treatment activities, types of equipment and duration/intensity are the same as those analyzed in the PEIR. The project proponent is responsible for maintaining control of all prescribed burning activities.

Impact WIL-2
Steep slopes occur within the project area. The potential exposure for people or structures to post-fire landslides was examined in the PEIR. This impact is within the scope of the PEIR because the treatment activities, types of equipment and duration/intensity are the same as those analyzed in the PEIR. With the implementation of the above listed SPRs, the impact should be less than significant. Low intensity prescribed fire, if utilized, is not expected to have a significant effect on slope stability.

Low intensity burning does not cause the same issues as a high intensity wildfire and should not be analyzed in the same way in terms of the environmental impacts to soil and slope stability. Low intensity burning often preserves the roots of the vegetation, supporting resprouting species and soil stability. Mechanical treatments on steep slopes may have the potential to cause slope instability, but with the inclusion of the above SPRs, this impact will be avoided and lessened. All proposed mechanical treatments shall be reviewed by an RPF prior to project implementation to ensure negative impacts to slope stability will be avoided.

The treatment project will reduce the potential for high intensity wildfire, which has a much greater potential impact on slope stability due to the soil hydrolysis which often occurs. Thus, this project is expected to have a net reduction in this potential impact overall.

CalVTP Addendum: Change to Geographic Extent

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 doesn't contain new areas which when treated, will cause a significant increase in the impacts listed above. Also, the environmental conditions are the same as those assessed within the treatable landscape. The included areas outside the treatable landscape have the same environmental conditions, vegetation types, erosion hazard ratings, geology, and orientations to the public as within the treatable landscapes. As a result, there are not expected to be any new impacts outside the scope of the PEIR. Consequently, these additional areas are within the scope of the PEIR.

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